

SD Times

SOFTWARE DEVELOPMENT

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FLASHLINE TARGETS THE ENTERPRISE

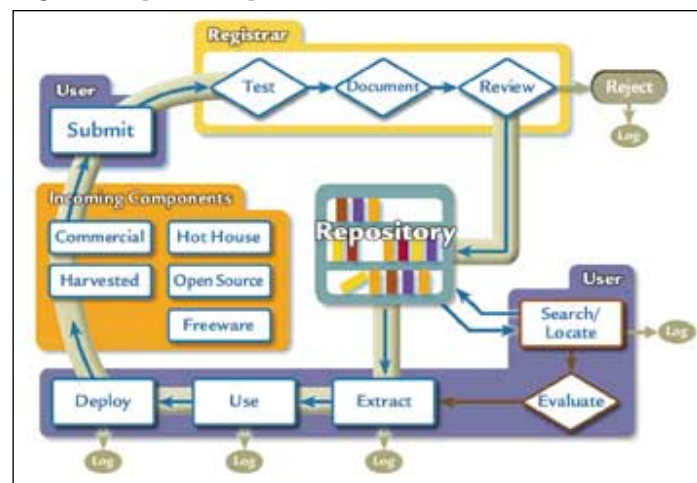
Component Manager helps development teams jump-start internal reuse initiatives

BY DAVID RUBINSTEIN

After marketing its Component Manager extension for integrated development environments at the programmer level, Flashline.com is taking a step up with the release this week of an Enterprise Edition that it calls the first comprehensive reuse solution for larger development shops.

When it was released last June as a proof-of-concept rollout, Component Manager claimed to help developers create components with help and testing available each step of the way. Component Manager Enterprise Edition (CMEE) adds a repository of more than

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This represents the component life cycle within Component Manager EE.

'Delphi for Linux' Finally a Reality

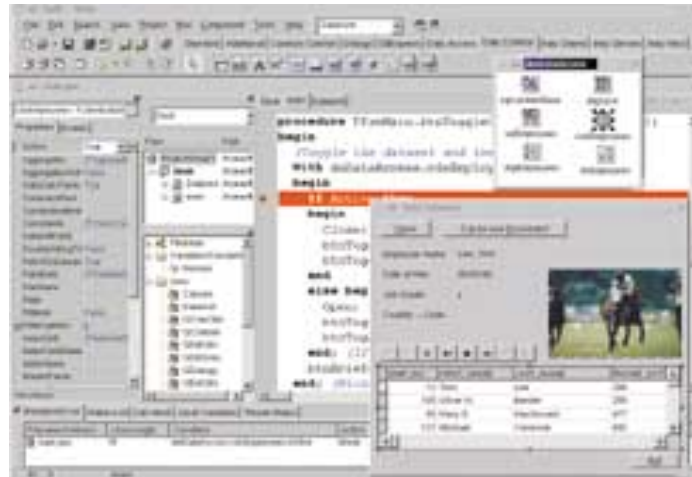
Borland releases long-awaited Kylix, lifts Linux into enterprise

BY EDWARD J. CORREIA

For companies that have been yearning for high-level development tools to legitimize Linux, the wait is finally over. Borland Software Corp. this week has released Kylix, its long-awaited rapid application development environment for Linux, bringing to an end a longing that began when the project was conceived in the spring of 1999.

Michael Swindell, director of Borland's RAD business unit, said the Kylix Server Edition is designed for developers building enterprise-class, data-driven

Apache Web server applications. It will include built-in Oracle and IBM DB2 connectivity and corresponding DBExpress components, Borland's predevel-



Project Kylix, also known as Delphi for Linux, is ready at last.

Oracle Says Web Services Ready .NOW

Oracle claims to offer .NET alternative, but critics say it isn't standards-based

BY DOUGLAS FINLAY

Oracle Corp. has added its name to the small cadre of companies seeking to sway Microsoft Corp.'s developers who want to move quickly to develop Web-service products, but who are hampered by Microsoft's apparent slow-to-market .NET strategies. That's why Oracle is aggressively telling those developers that its 9i Dynamic Services software is ready and willing to build Web-service access to existing Web sites, and manage and manipulate that data all within a Java/XML framework.

"We think there are Microsoft developers who are now looking at alternative methods for building the next generation of Web applications because Microsoft has had to rearchitect its technology stacks for the Internet, which were optimized for the Windows PC era, and right now it's a



Microsoft developers are looking for alternative solutions, says Oracle's Magee.

slow, difficult process for them," said John Magee, Oracle's (www.oracle.com) senior director of platform marketing.

Magee said the company's tongue-in-cheek .NOW marketing strategy simply points out that its J2EE-compliant 9i Dynamic Services, along with other company offerings such as its 9i Application Server, JDeveloper Kit and Internet Directory, could all be integrated and used to access Web sites that feature services—he cited examples such as travel bookings, currency rate conversions or even mortgage banking—while manipulating the data for specific user purposes.

Of course, Microsoft isn't taking Oracle's charges sitting down. Barry Goffe, product manager for .NET, denied Magee's characterization of the company as being slow to mar-

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oped database software widgets.

The server version also will include NetCLX, which Swindell described as a set of data-aware Apache Web server components for building Apache DSO or CGI applications. And since NetCLX components are compatible with Delphi WebBroker components currently being used to build Microsoft's ISAPI and Netscape's NSAPI server-side applications, "you can take a Delphi WebBroker application and easily port it to NetCLX and vice versa," Swindell said. "So many of today's [Microsoft] IIS ISAPI Web server applications are going to quickly come over to Apache on Linux," he predicted. According to Borland, there are a combined 4 million Delphi and Visual Basic developers today.

The desktop version is targeted primarily at client and GUI

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XML Queries Reach Across Databases

Nimble's engine reveals mainframe, relational and object data as XML views

BY DOUGLAS FINLAY

Nimble Technology Inc. is offering developers an alternative to using SQL to extract information from databases. The company's new Integration Suite 1.0, now in beta, is designed to let developers use XML to combine information from multiple unrelated databases for use in custom applications.

"If you're an enterprise developer and your corporation has a lot of data spread throughout the enterprise, and you have to write the application to get all that data and join it together to produce answers your internal customers require, then you may want Integration Suite," said Franklin Fite, Nimble Technology's (www.nimble.com) chief technology officer.

"We see the suite as helping developers with the very complex problem of interacting with these underlying data sources, and managing and optimizing the way they gather

the information from these sources. And, it permits developers to reuse the work they have done before to create applications more efficiently," added Frazier Miller, director of product development.

Aimed squarely at mid- to large-size enterprises, Fite said the Integration Suite maps each data source connected to the query process engine—such as a mainframe, object or relational database—providing the engine with an XML view of the data source. "The engine will see a relational database, for instance, as an XML document—XML documents and databases meaning the same thing in this context, in that they store records. Similarly, the engine also sees IMS for mainframes as an XML view, once it's mapped," he said. Indeed, all data sources will look like XML documents, he said.

Fite said the query processing engine, an early version of the XML-Query Language

called XML-QL presently under review by the W3C, then begins a sophisticated query across the multiple databases, constructing answers from the results to apply to applications. Miller called the suite a virtual database, saying the databases act as single documents because the relationships between the different data elements and the data sources are, in essence, captured.

Fite claimed the XML query processing engine executes the

same feats as SQL query engines do, unifying different data sources, aggregation and set differences. Fite said that Integration Suite 1.0 could entirely eliminate developer requirements to write queries for each single database.

Fite also said that once an overall XML view is built, the data can be rearranged to build multiple views for different applications. "A developer in customer relationship management can have one XML view,

while a developer in business-to-business can have another XML view, both using the same underlying data source," he said.

Running on both Sun Solaris and Windows 2000 operating systems, Integration Suite 1.0 is due for release this summer. The company is currently looking for beta partners to test its adapters, interfaces and tools required for accessing multiple databases in real-world environments. Pricing has not been finalized. ■

MacOS X Coming in March

BY ALAN ZEICHICK

SAN FRANCISCO — At the Macworld Expo conference held here in early January, Apple Computer Inc. CEO Steve Jobs announced that MacOS X, the long-awaited operating system for the Macintosh, would finally ship on March 24.

In development for years—and with a change in direction after Apple purchased Jobs' NeXT Computer Inc. and its NeXTStep version of Unix—the new operating system is a complete departure from the "classic" Macintosh operating system, which was introduced in 1984 and also updated in early January, with the release of an interim upgrade, MacOS 9.1.

Apple claims that more than 100,000 users and developers purchased the public beta of MacOS X (pronounced



A look at the MacOS X interface.

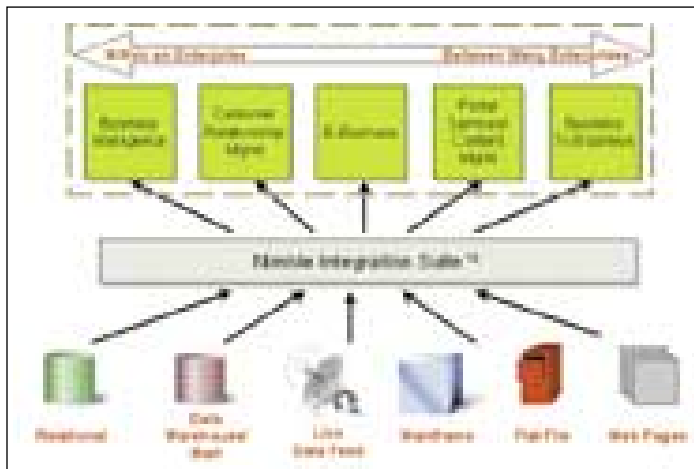
"ten") for \$29.95 since it debuted last September. The new operating system is based on a NeXTStep-derived and open-source version of Unix named Darwin and a new graphics engine based on Adobe's Portable Document Format (PDF) protocol.

Macworld
Conference & Expo.

While most popular attention has been paid to MacOS X's new translucent user interface, called Aqua, the developers have focused more on supporting its so-called "Classic API," which is designed to allow existing MacOS applications, written for earlier versions of the operating system, to run on

MacOS X, as well as the Carbon API, which is an interface directly to the Unix kernel, and the Cocoa API, which is a set of interfaces designed specifically for object-oriented applications using the Objective-C language developed by NeXT. According to Apple, MacOS X also contains the full Java2 API set.

MacOS X (www.apple.com/macosx) will be priced at \$129 per copy, and according to Apple, will run on most existing Motorola PowerPC G3 and G4-based Macintosh systems. ■



Integration Suite 1.0 provides different XML views for several departments.

Put Down Those Headsets

IBM's translation server facilitates global communication

BY DAVID RUBINSTEIN

"Tear down that wall!"

Those words, spoken by then-President Ronald Reagan some 15 years ago, led to the collapse of the Iron Curtain. Today, IBM Corp. is playing on that theme to bring down barriers to international trade and communication over the Internet.

In March, IBM plans to release its WebSphere Translation Server (WTS), which offers bidirectional translation into numerous languages to facili-

tate understanding in real time.

"It really knocks down a barrier to global communication," said Ed Zinnes, IBM's marketing manager for voice middleware. "IBM is legitimizing the market for machine translation."

The WebSphere Translation Server is a snap-in tool that "gives the gist" of the information included in an e-mail, a chat conversation or on a Web page, Zinnes said, emphasizing that it is much more economical and dynamic than using word-

for-word professional translation services. It can be customized with vocabularies and grammars specific to an industry or age group, for example, to increase the level of accuracy, Zinnes said. "Dr. means doctor," Zinnes explained. "It also can mean Drive in an address. It's important not only to do translation, but also to get the context right."

One of the first customers to use this technology is Deutsche Bank Private Banking, Zinnes

said, which is using the translation capability within its 6,500-employee intranet to facilitate communication around the world. For Web pages, Zinnes said studies have shown that people who visit sites in their native language are more apt to stay in the site and to make a transaction. By clicking on a button on a Web page that runs on a server with WTS, a dynamic, native-tongue page is generated. Zinnes explained that many Web sites that now offer their pages in more than one language actually have to create the page numerous times, and any updates have to be done individually, in each language

supported. This, he said, is both costly and time-consuming.

The first release supports bidirectional text translation between English and French, German, Spanish and Italian, Zinnes said, with one-way capability between English and Chinese, Japanese and Korean. The server runs on AIX, Solaris and Windows NT and can translate between 200 and 500 words per second, he said. It is being priced at \$10,000 per language pair, which Zinnes said should make the server available to smaller enterprises as well. It will be available at IBM's Web site at www.ibm.com/developer. ■

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Visible Systems Acquires VB Mentor, Completes Modeling Tool Family

BY DAVID RUBINSTEIN

Visible Systems Corp. is finally able to finish its model-based application development suite, having recently acquired 3t Software Inc. and its VB Mentor code generator.

According to Wolfgang Mueller, Visible's vice president of sales and marketing, VB Mentor has been upgraded, released as beta and now renamed as Visible Developer 2.5. "There was a lot of complementary functionality between the products," Mueller said. "This gives us added capability we did not have." Visible Systems has been in the data modeling and configuration management space.

The acquisition of 3t was finalized at the end of November 2000. Visible (www.visible.com), which is headquartered in Waltham, Mass., and has an office in Alexandria, Va., will maintain the former 3t offices in Reston, Va.

Visible Developer offers code generation for Visual Basic applications, and Mueller said support for C++, Java and C# will be added in future releases. The emphasis, he explained, is on business component design, execution and reuse as well as application modernization and integration.

John Vosburgh, founder and president of 3t and now vice president of business development at Visible, explained there are four components to Visible Developer: a model repository; rules, such as business properties, methods and views; a code generation engine; and code patterns, which are the detailed blueprints for development. "We found ways to do practical reuse with code patterns," he said. "This gives a customer a lot of leverage, technological independence and the ability to focus on his business."

When used in conjunction with other Visible products, Vosburgh explained, development teams have a complete solution. Visible Advantage is a front-end modeling tool for business planning and technology implementation, Visible Analyst does data modeling, and Visible Developer can take a data model from a database supporting ActiveX Data Objects (ADO), build a design of business objects and send back information about the classes that were generated in the code.

While the solution appears to compete with such offerings as Rational's Rose and Advanced Software Technologies' GD Pro, Mueller said Visible's solution is the only one that is totally integrated to include design, mod-

eling, code and reuse.

Visible Developer is an add-in to Visual Basic 6 Enterprise or Professional, Mueller said, but it is expected to be released as a stand-alone application in the future. Among new fea-

tures are design-time objects made up of rules and views, giving developers the ability to better define and design business objects, Vosburgh said. Also, the user interface has been enhanced to display

all design-time objects and their relationships. It costs \$995, which includes the license and a 12-month maintenance contract. When bundled with other Visible products, pricing incentives kick in. ■

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XSL Plays Important Role In Transformation of XML

BY LARRY O'BRIEN

In the first part of this series ("A Field Guide to XML," Jan. 15, page 3), we discussed the emergence of XML and XML Schema, two important specifications from the World Wide Web Consortium, or W3C. Missing from those specifications, however, is any way to separate an XML document's presentation from its data. That's the job of a third specification, the Extensible Stylesheet Language (XSL).

XSL has two components: XSL Transformations (XSLT) and XSL Formatting Objects (XSL-FO). XSLT is by far the more important; it describes the transformation of one XML document into another, using XPath to match patterns with elements in the source document. Although this is a very powerful general utility, it is most often used to transform XML data feeds into a page for display in a browser. The XML can come from any source (provision transparency) and the

server before serving HTML to the client. To be honest, many say that XSLT is not yet viable and that one should use XML plus Cascading Style Sheets (CSS) until widespread support for XSLT is available in browsers.

While the easy-to-create HTML link based on the <a> tag succeeded where gopher failed (if you're asking what gopher is, my point is made), it does have some shortcomings in terms of hypertext. An HTML link is an all-or-nothing, one-way jump to a single document. The XML Linking Language (XLink) overcomes all of these issues by defining a much richer linking language allowing, for instance, many-to-many links, replacement links, different types of behavior on loading and so forth.

One of the most egregious problems with HTML linking with the <a> tag is that targets for linking must be defined by the author of the piece. For instance, if you wanted to link this article from your Web site, you could link to <http://www.sdtimes>

from a practical standpoint, an XLink-connected Web is still far over the horizon.

Moving beyond display and link technologies, the great challenge on the World Wide Web is discovering content. There are a number of important XML initiatives associated with this problem, linked by the common theme of metadata, data about the data. The mother of all metadata initiatives is the Dublin Core Metadata Initiative. So far, the most important recommendation from the initiative is the Qualified Dublin Core, 15 elements such as "Creator," "Subject" and "Description" that are often used in Resource Description Format (RDF), a W3C Candidate Recommendation that should be high on your list of "trends to be aware of."

RDF can be used in many ways, but RDF/Rich Site Summary (RSS) is the clearest example of metadata's killer app potential. RSS began as the channel description format for Netscape's "My Netscape Network" portal. It has evolved into a syndication framework that is supported by thou-



transformation can be to any of several display languages—HTML and XHTML most commonly, but other options include Wireless Markup Language (WML), Adobe Acrobat PDF format, and straight to XSL-FO (which one can imagine being supported directly by printer drivers).

XSLT is a core competency for Web developers, starting today. As I've discussed in my Web Watch column, almost every Web site with dynamic content should be using XSLT to create HTML documents for the client. Unfortunately, one cannot count on an XSLT client, and thus one must do the XSLT transformation on the

.com/whatever, but if you wanted to link to this paragraph, in particular, you'd be out of luck unless I had embedded a link "anchor" in the HTML. XLink overcomes this; you can link to any place in the target document by using an XPointer, which adds the concept of ranges and points to XPath, mentioned previously in the XSLT discussion.

No browser provides even rudimentary XLink support, and it cannot be done on the server. Some people have tried to use JavaScript to simulate certain aspects of XLink (such as links to multiple targets), but

sands of sites and is the basis of such powerful applications as the Meerkat wire service (meerkat.oreillynet.com). In the future, RDF will undoubtedly be the basis of improved search engines—search engines that know the difference between "Java" as coffee, an Indonesian island and a programming language. ■

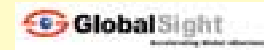
NEXT ISSUE:
XML IN THE MACHINE

Larry O'Brien is a software engineering consultant based in San Francisco. Reach him at lobrien@email.com.

News Briefs

COMPANIES

The Middleware Company is offering XML, J2EE, EJB and EJB for Architects courses in Austin, Texas, starting this month. The five-day seminar-style interactive discussion courses combine with lab exercises to provide hands-on experience in constructing server-side Java solutions. Courses include Java 2 for Programmers, Feb. 12-16; Mastering J2EE, Feb. 19-23; Mastering XML, Feb. 26-March 2; Mastering EJB, March 12-16; and EJB for Architects, March 19-23 . . . **Sun Microsystems Inc.** has released Solaris 8 Operating Environment source code, which contains kernel and networking source code and components from administration software. The code is available for free at www.sun.com/solaris/source . . . **Persistence Software Inc.** has joined the W3C's XML Protocol Working Group and XML Schema Working Group, where senior software architect Jeff Mischkinsky will assist in developing a framework for XML-based messaging systems . . . **Lionbridge Technologies Inc.** expanded its VeriTest certification and e-testing infrastructure with the acquisition of **Quality Group Labs Inc.**, a computer system service provider and software tester. Quality Group's certification programs for IBM and Novell are expected to integrate well with Lionbridge's VeriTest certification programs for AutoDesk Inc., BMC Software Inc., Microsoft Corp. and Oracle Corp . . . **Percussion Software Inc.**'s partnership with **GlobalSight Corp.** combines GlobalSight's System 3 globalization management system with Percussion's Rhythmyx XML Content Manager to enable



companies to acquire content from any source in any format and convert that format to be delivered over any delivery mechanism. The combined system

addresses all linguistic, technical, organizational, managerial and translational aspects of the content . . . A Java University Program will be held by **Camelot Communications Corp.** and **Sun Microsystems Inc.** on Feb. 26-27 during the International Conference for Java Development at New York's Marriott Marquis Hotel. Code-level training sessions will be offered. Visit www.javacon2001.com for more information . . . **Borland Software Corp.** has released a patch for the HP-UX, Linux, SCO, Solaris and Windows operating systems, versions 4.0 through 6.0, that fixes a potential security issue that could otherwise enable illegal access to database metadata. Patches can be downloaded from www.borland.com/interbase/downloads/patches.html. Other operating-system users can contact interbase@borland.com for help in securing patches for their operating systems.

PRODUCTS

The Breeze Factor LLC's **Breeze XML Studio Release 2.2** adds XML structure display, code generation and performance enhancements, such as a SAX2-compliant parser, that provide higher-performance XML and DTD parsing. Version 2.2 also provides data binding (converting XML to Java classes) for OFX, CXML and a host of other large XML vocabularies . . . Mabry Software Inc.'s **Grid/X** ActiveX control features vertical or horizontal views of data it manages, Rowstyles with Boolean expression, for evaluating each row of data before it is displayed; GroupByBar, for easy presentation of hierarchical data; and StatusBar for displaying status. Data modes and extensibility exclusive to Grid/X include Object, Collection and VBAdaptor. Price is \$249, \$599 with C++ source code . . . Lineo Inc. has ported the **uClinux 2.4** kernel to Motorola's **DragonBall** processors. With a typical kernel footprint of 512K, and no memory management hardware, uClinux users will now be able to access new Linux 2.4 kernel features such as USB support, IrDA (infrared data transmission) and QoS (quality of service) . . . **Visual SlickEdit version 6.0 for Unix** from MicroEdge Inc. offers support for HP-UX, IRIX, Linux, SCO and Solaris operating systems. New features include Java tool integration, Java wizards and multiple build configurations; context tagging improvement through the auto parameter info; and a DIFFzilla file differencing tool enhancement that differentiates specific symbols within files. Price is \$395 . . . Caribou Lake Software Inc.'s **JSockets version 1.9.2** software for firewall tunneling is said to offer up to eight



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SOAP Toolkit 2.0 Enters Beta

BY ALAN ZEICHICK

Windows developers who want to use the Simple Object Access Protocol can now download Microsoft's SOAP Toolkit version 2.0 from the company's

developer Web site. Currently in beta, the new toolkit contains the tools and components designed to help Windows developers build applications that can use XML to exchange

data over the Internet.

According to Microsoft, a key difference between the two is that the Microsoft SOAP Toolkit version 1.0, last updated in December 2000, and the .NET

Framework and Visual Studio.NET Beta 1 are based on the older Service Description Language (SDL) for describing the capabilities of a Web Service, whereas the SOAP Toolkit version 2.0 and .NET Framework and Visual Studio.NET Beta 2 release support the new Web Service Description Lan-

guage (WSDL).

SDL is an XML grammar developed by Microsoft for describing network services as collections of network endpoints that can exchange XML messages. WSDL is a replacement to SDL jointly developed by Ariba, IBM and Microsoft. WSDL defines the SOAP messages and service call formats.

According to Microsoft, the first SOAP Toolkit 2.0 beta is compatible with most of the SOAP 1.1 specification, as well as the W3C's newly proposed XML Schema Definition (XSD). The company says that the finished version of the toolkit will have greater SOAP 1.1 compatibility. Microsoft has not committed to a time frame for a second beta or final release of the SOAP Toolkit version 2.0, but technical documentation warns, "Given the Web release cycle the Microsoft SOAP Toolkit version 2.0 team has adopted, you can expect multiple updates by fall 2001."

SOAP Toolkit Beta 1 requires the use of Microsoft's MSXML Parser 3.0 and the Internet Explorer 5.0 Web browser. The SOAP Toolkit version 1.0 was an unsupported product provided at www.msdn.microsoft.com/soap, according to the company. When SOAP Toolkit 2.0 finally ships, it will be an officially supported Microsoft product. ■

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Citrix Client Supports OS/2

Technology pundits have been proclaiming the death of IBM's OS/2 Warp operating system for years, but it's not dead yet, as evidenced by Citrix Systems Inc.'s new ICA client for OS/2.

Available now in beta, the OS/2 ICA (Independent Computing Architecture) client lets workstations running OS/2 run Windows and Unix applications hosted by Citrix's WinFrame and MetaFrame application servers.

The new OS/2 client is being written to be compatible with Citrix's ICA version 6.0 protocol, which was introduced along with the company's MetaFrame 1.8 Feature Release 1 server software.

The first beta of the Citrix OS/2 ICA client (www.citrix.com/beta-os2) began in January. A second beta period will commence in March, the company projects.

—Alan Zeichick

BizTalk Server 2000 Now Available

BY DOUGLAS FINLAY

Microsoft Corp.'s BizTalk Server 2000, a cornerstone of the company's ambitious .NET strategy for the Internet, was to be released for general availability last week.

According to Microsoft's Dave Washa, BizTalk Server product manager, BizTalk Server's claim to fame is its Orchestration Visual Design Environment, a graphical business process editor. The server also features a new XML-based language called XLANG, which translates the visual representation of business processes and code connections into an XML representation, and then creates an executable business process from it.

BizTalk Server 2000 includes five messaging tools that connect business processes to out-

side partner businesses to enable them to exchange documents of any type: BizTalk Editor for creating XML schema and importing Document Type Definitions; BizTalk Mapper for schema-to-schema conversions;

BizTalk Management Tool for creating trading partnerships; BizTalk Administration Tool for managing hardware connected to the server; and BizTalk Document Tracking Tool for tracking information within the server.

The server is available in two versions. The Enterprise Edition supports the integration of unlimited internal applications with unlimited trading partners, while the less-expensive Standard Edition integrates up

to five internal applications with as many as five trading partners. Both versions support multiprocessor servers and clustering deployments on Windows 2000 Server.

The Enterprise Edition starts at \$24,999 per processor, while the Standard Edition starts at \$4,999 per CPU. ■

STINGRAY DEPLOYS XML ADAPTERS

BY DAVID RUBINSTEIN

In conjunction with the general release by Microsoft of the BizTalk Server 2000 this week, the Stingray division of Rogue Wave Software Inc. has released adapters that link Enterprise JavaBeans (EJB) and CORBA objects to XML within the server's Orchestration Visual Design Environment.

"We worked with Redmond engineers to come up with an XML crunching engine to orchestrate the 'behind the scenes' as messages work through the back end," said Bill Martschenko, Stingray's chief architect. He explained that after a work-flow diagram is mapped out on BizTalk Orchestration, defining how an XML request will move through a back-end environment, the adapters can be used to stuff the request parameters into a call for CORBA or EJB, and when the values come back, the adapters will translate the information back into XML for the outbound message.

Jay Pitzer, Stingray's group product manager, said Microsoft's plan was to have third parties provide the bridges to CORBA and J2EE. "In practice, would anyone trust it if Microsoft tried to build a bridge to Sun or OMG?" he asked. The adapters are available only through Stingray's (www.stingray.com) consulting services group. ■

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MORE PRODUCTS

← continued from page 7

times faster delivery of data and business objects through firewalls and proxy servers because of enhancements in the Java servlet Web server glue. In addition, the Java servlet has been certified in several new Servlet 2.1-compliant engines, including Tomcat 3.x, iPlanet's Web Server and Applications Server, JRun 2.32 and 3x and Unify ServletExec . . . With Dirig Software Inc.'s **Specific Application Manager** (SAM) for Allaire's **ColdFusion** Web application server, program-



mers can manage applications with minimal or no added configurations. Using drag-and-drop functions, a set of predefined rules are auto-

matically created, providing programmers with maximum application management . . . Perforce Software Inc.'s **Release 2000.2** of its software configuration management (SCM) system features P4Web that turns customer Web browsers into interfaces for accessing the SCM, and Visual Merge for Windows that merges three different variants of files into one single file, within a graphical environment. Price for a single-user license is \$600 . . . **Unity**, Opus Solutions Inc.'s pure Java Web-enablement software, consists of Java servlets that function under any Java-based application server, including IBM Corp.'s WebSphere and Apache.org's Tomcat. It also supports relational data sources such as IBM's Universal DB2, Microsoft Corp.'s SQL Server and Oracle Corp.'s 8i database. Unity will be available in April . . . Sitraka Inc.'s new **JClass ServerChart** permits programmers to build charts and graphs, while its J2EE Integration Portal provides Java programmers with late updates on integration tools for IBM's WebSphere and BEA Systems' WebLogic application servers, among other servers . . . Microsoft Corp. released the final version of the **BizTalk 2.0 Framework** for securing the reliable exchange of documents over the Internet. The framework is based on the company's SOAP specification.

PEOPLE

Endeavor Technology Inc. has appointed **Stephen Schwab** as chief security architect. Formerly from the Defense Advanced Research Projects Agency, Schwab will be responsible for addressing security issues related to peer-to-peer software architecture . . . **Jason Liu** got the nod from Callisto Software Inc. to be its new chief executive officer. A former chief financial officer at Ravisent Technologies, Liu has been mandated to grow Callisto into a leading provider of systems management software for mobile and remote computing for smart mobile devices . . . **John Bowman** has taken over as director of product management at Cigital Inc., where he will be responsible for managing the strategic vision of Cigital's software risk management products, specifically the Cigital Advantage SRM . . . BMC Software Inc. gets a new president and chief executive officer in **Robert E. Beauchamp**, succeeding **Max Watson**, who remains as chairman. Beauchamp has served BMC Software as senior vice president of product management and development, and vice president of strategic marketing . . . DevX.com Inc. has named **Alice Locke-Chezar** as director of corporate communications, where she will help implement marketing initiatives to broaden awareness of DevX development services.

STANDARDS

The W3C has accepted a **SOAP 1.1 XML extension** to the transport protocol from Commerce One Inc., Hewlett-Packard Co., IBM Corp., Iona Technologies Inc., Microsoft Corp. and Web Methods Inc. that adds blueprints, circuit diagrams, handwritten signatures and images from catalogs to the total transport package being studied by the consortium. The additions will require no modifications to the present 1.1 specification . . . The W3C has also released the **Extensible HTML (XHTML) Basic** specification, a simpler version of XHTML 1.0, a combination of HTML and XML. XHTML Basic is designed to work with mobile Web devices . . . The Organization for the Advancement of Structured Information Standards (OASIS) has created an XML-based Security Services Technical Committee to help develop a unified XML-based interoperability standard for securing Internet transactions, based on the **AuthXML** specification. ■

.NET CAN BE PUTTY IN YOUR HANDS

BY EDWARD J. CORREIA

WebPutty Inc. last month released WebPutty Application Framework 2.0, for Windows NT/2000 and .NET, an enterprise development environment that the company claims can simplify Web application development, deployment and management for companies using the Microsoft .NET platform.

WebPutty abstracts underlying COM, C++, ASP, XML and SQL development technologies, combining them into a single platform that is accessed through a Web browser. Version 2.0 adds support for PocketPC, SQL Server 2000 and integrated version control.



WebPutty enables .NET development through IE5.

The key to the framework, the company says, is its use of metadata to describe database schema, business logic and the user interface. To build applications, developers point Internet Explorer 5.0 to the Presentation

Tier, which uses HTML and ASP pages to present programming objects. This top-most layer communicates with the object-oriented Application Tier, which automatically generates C++ and XML code or SQL procedures. Objects may be extended with Visual Studio.

At the lowest level is the Persistence Tier, which stores all data and metadata in recoverable SQL databases. An external rules engine maintains business logic and allows on-the-fly changes.

WebPutty Application Framework 2.0 (www.webputty.com) is available now starting at \$6,000 per developer seat. ■

Tamino Serves Mainframe Via Linux

BY DOUGLAS FINLAY

Making good on its announcement from last May's customer conference in Berlin, Software AG Inc. is now porting its Tamino XML database server to the IBM S/390 mainframe through SuSE Inc.'s Linux Enterprise Server.

Alf Goebel, president of Software AG (www.softwareagusa.com), which has a long-standing business partnership with SuSE, said bringing Tamino to the mainframe was aimed at those developers working the mainframe as a transaction and deployment platform. "In running Linux on the S/390, you can run hundreds of Linux ker-

nels parallel on this machine, using the existing S/390 investment as an operating platform to deploy new XML business-to-business applications in this environment," he said.

Halldor Jorgensen, Software AG's vice president of marketing, added, "The advantages for developers in running an XML database through Linux connected to the mainframe are more from an operational standpoint, a matter of scale. If you need a transaction horse that deals with large transactions, there's no other platform robust enough today to do it." He said large enterprises serious about running

any Linux operations would still want to use their mainframes to run them.

Goebel added that IBM had told him that developers were also looking to Linux as a development alternative to Windows NT. "Developers like choices, and the only choice at the moment for mainframe developers is the NT environment," he said. He said that because many college students today were learning on the open Linux system, Linux's future in business was bright.

Pricing for the Tamino XML database running on the S/390 under SuSE Linux starts at \$300,000. ■

Iona Joins J2EE Class of 2001

BY DAVID RUBINSTEIN

Iona Technologies Inc. has begun shipping its iPortal Application Server with Sun's seal of J2EE approval, and has added several new features to develop and manage applications.

According to Sun, there are 25 companies licensing the J2EE platform and nine vendors who have passed the compatibility test suite. "Most people are dictating that J2EE compliance be shown," said Simon Pepper, Iona's director of J2EE products. "They want adherence to standards at large-enterprise shops."

A key new feature that Iona (www.iona.com) now includes with the app server is its iPortal

Administrator Console, a graphical interface to manage applications that is done through the implementation of Sun's JMX extensions. Iona, Pepper said, is taking that technology to CORBA as well. "You can see a whole range of apps from a single point [the management console], and can instrument down to a lower level," Pepper explained.

To speed development time, Iona also has added tools and wizards, which Pepper said "turn debug-change-deploy so it is almost instantaneous." Also, he said, the app server now supports HTTP security with 128-bit encryption.

The app server is shipped with Sonic MQ messaging,

which Iona licenses from Progress Software and a Cloudscape database licensed from Informix, which the company claims will help developers get a complete Enterprise JavaBean application up and running on a development server. When an enterprise wants to deploy that application, Pepper said, it can hook into back-end databases, as Merant's JDBC drivers are included for third-party connectivity to a wide range of leading databases. The iPortal Application Server comes in two editions—Standard and Enterprise. Developer licenses are available in the U.S. for \$1,495, and runtime licenses start at \$10,000 per CPU. ■

An aerial photograph of a city street scene. In the center, a red convertible car is driving, with a person visible in the driver's seat. To its left is a dark blue sedan, and to its right is a silver sedan. Further back, a blue Volkswagen Beetle is visible. Pedestrians are walking on the sidewalks. The scene is captured from a high angle, looking down on the street.

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QIS Releases Test Automation Suite

BY DAVID RUBINSTEIN

Moving toward empowering nontechnical members of a development team with the ability to test applications, Quality Information Systems Inc. has released the Quality

Control Information Tool (QCIT), a test automation suite that requires no scripting or programming language.

"We wanted QCIT to be a tool for the group that sits around the conference table,"

said Jose Correia, QIS product manager. "Business people, developers, QA staff...QCIT supports all of that." QCIT, available in beta form since April 2000, is the result of the company's revamping its TracQA tool.

"While we were selling it, there were some issues," Correia admitted. "But now we feel the product's really good to go." QIS is the result of a September merger of Quality Systems International Inc., which originally

developed TracQA, and Quality Engineering Software Inc. Both were in the testing market.

The QCIT suite (www.qistest.com/qcit.htm) includes test management and test automation tools, Correia said. The test automation tools—Architect and WinEZ—work by modeling an application to be tested, then capture, replay and compare elements, he explained. Architect tests character-based applications on mainframe, AS/400, Unix and OS/2 platforms, while WinEZ tests Windows or GUI applications.

The test management piece, QCIT Manager, is a customizable tool that can be used to cover all areas related to testing, including test plans and test cases, requirements, defects and projects. "This is more of a full life-cycle tool," Correia said. "A development team can add requirements to QCIT and link to products and projects being tested."

QCIT supports Windows 9x/NT/2000 and can be used with any ODBC-compliant database, Correia said. The price of QCIT begins at \$1,995 per developer seat with volume discounts available, Correia added. ■

Seapine Adds XML To TestTrack 3.1

BY DAVID RUBINSTEIN

To help facilitate communication within enterprise development teams, Seapine Software Inc. has added XML support to its TestTrack 3.1 problem-tracking application, which was to be released by the end of January.

TestTrack, explained Rich Clyde, vice president of product development at Seapine (www.seapine.com), is not an automated testing tool; rather, he said, it is a communications tool for use by the team after quality assurance (QA) finds a problem.

"Other testing tools provide the basic information," Clyde explained. "With XML, we now have a way to give that information into a format to push communication outward."

TestTrack 3.1 provides a quick way to send information regarding problems via e-mail.

TestTrack 3.1 is \$229 for a single dedicated license for the desktop, and \$279 for a Web license that includes a Web interface. Unlimited licenses are \$4,999 for the Web and \$7,495 for the desktop, or \$10,995 for both interfaces. ■

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Information Architects Delivers on RDF Promise

BY EDWARD J. CORREIA

If your developers have been struggling to adapt enterprise data to XML-based delivery methods, a solution may be at hand.

Information Architects Corp.,

which specializes in XML-based content delivery systems, has released SmartCode Wireless Framework, the latest component in its SmartCode Framework, a server-side software solution that the company

says enables nonprogrammers to structure and deploy enterprise data to all manner of Web-connected devices.

According to Bob Gruder, CEO of Information Architects (www.ia.com), the Wire-

less Framework is the first commercial application of the Resource Description Framework, or RDF, an XML-based specification published by the W3C last March. RDF is intended to provide a founda-

tion for processing metadata between applications, and that can simplify content formatting for disparate devices.

"Within the GUI, you will be able to point and click and build applications that can aggregate content from any source, syndicate it and put it onto any kind of device," said Gruder, adding that through an administrative tool, developers also can add business logic, caching and security features to data, elevating it from "brochureware" to purposeful content.

Gruder illustrated his point by describing how a doctor might use a handheld device to read a patient's test results and select from a list of treatments, which also were stored with the results.

The W3C (www.w3.org) described RDF as an XML-based means to exchange descriptions of machine-understandable information about the Web resources available to applications on either end. Resources can be XML- or non-XML-based, and can be used to describe site maps, content ratings, stream channel definitions, search engine data and digital libraries, to name just a few. Further, content relationships can be described to help facilitate data exchange between sites.

To address the specific needs of wireless content providers, the W3C has been working with the WAP Forum to establish as a standard its so-called composite capabilities and preference profiles, or CC/PP. The specification can be used to identify devices by screen size and other device characteristics to help Web developers keep up with the growing number of devices accessing their content. Rather than manually building style sheets each time a new device becomes known, RDF provides the means to dynamically build XSLT style sheets based on device profiles, and to tailor content accordingly.

SmartCode Framework, which includes the wireless component, is available now and is priced at \$140,000 per server. ■



The RDF spec can elevate data from 'brochureware,' says Gruder.

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iPlanet Revs Up Integration, B-to-B Servers

BY DOUGLAS FINLAY

iPlanet, the Sun/Netscape alliance, has enhanced both its XML-based Integration Server and its ECXpert business-to-business server for converting and routing documents.

The primary new feature of Integration Server 2.1 is support for the Java Messaging Service (JMS). "We think this will be compelling for developers who have Java components and middleware, and use them as mechanisms to communicate," said Sanje Sarathy, iPlanet's (www.iplanet.com) director of product planning. With JMS, he said, the Integration Server could now provide an end-to-end solution for developers at the application side or at the integration side through a native Java interface. The addition of a JMS implementation into Integration Server is a requirement of the J2EE 1.2 specification.

Also, Sarathy said, "We've added the ability to do multiple styles of integration within the server, such as a simple point-to-point or rules-based integration that involves a rules engine based on XSLT, or to provide process-driven integration enabling developers to use the process engine that is part of the server."

Rounding out new server features are a provision for more

secure HTTP calls into the Integration Server, and performance enhancements to the application proxies between the Integration Server and the applications they are integrating.

The ECXpert 3.5 business-to-business server adds XML support to enable business partners to send, receive, parse and translate XML documents. Sarathy added that

XML was included to increase the stable of other native document exchange formats available, such as EDI, FTP and encrypted e-mail.

Also new to 3.5 is priority

processing, Sarathy said, where if a business event requires an order immediately, it can be tagged as priority and jumped over other documents in the queue.

Available immediately, ECXpert 3.5 costs \$100,000 per two CPUs, and Integration Server 2.1 starts at \$39,500 per CPU. ■

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SCANSOFT DK 2000 IMPROVES RECOGNITION

ScanSoft Inc.'s Developer Kit 2000 version 10 features 10 new and upgraded recognition engines for improving accuracy and flexibility in converting paper to digital images via optical character recognition (OCR).

Among the new features are a new OCR engine, which the company claims reduces errors by 30 percent over its previous version; new controls permitting developers to define resident or nonresident recognition engines in memory; and a new algorithm and improved threshold capabilities for better conversion of color and grayscale images to black and white.

Pricing for DK 2000 version 10 from ScanSoft (www.scansoft.com) ranges from \$2,495 to \$6,990, depending on configuration. —Douglas Finlay

FLASHLINE

< continued from page 1

200 documented and tested open-source components to help enterprises jump-start their reuse initiatives, according to Flashline CEO Charles Stack.

"We're seeing some new job titles within organizations,

such as reuse manager, Java object services manager, component enablement and reuse committees," Stack said. "The key benefits of [CMEE] are to enable, promote and measure components. This basically quantifies reuse."

CMEE plugs into an IDE repository, integrating with a

J2EE-compliant application server sitting behind a company's firewall for the protection of intellectual property, Stack said.

Stack said Flashline (www.flashline.com) is not trying to make over development shops, admitting there are organizations that won't be ready for this. "If they're a client/server, C-

based shop, we'll dissuade them until they're at a different mindset," he said. "If they've already adopted J2EE technology, like many global 2000 companies have, then they're ready" for component reuse. "We've identified 40 critical success factors that a management team must be attentive to for this product to

be successful," said Flashline's chief technology officer, Gary Baney. "J2EE is pushing development in this direction."

A critical piece to CMEE, explained Stack, is a registrar who controls the component repository in four classifications—educational, approved, recommended and mandated. For instance, a development manager might mandate that, in certain applications, one particular user authorization component be used. Also, the registrar is the final voice on whether a component can be placed into the repository or must be sent back to the developer for reworking.

The repository itself is what enables component development, Stack said, and also serves to promote reuse, as the tool helps in the management of an enterprise's intellectual property assets.

The component measurement function is facilitated by an extensive set of logs that track peer evaluation and use history, and development time saved broken down by project, component and developer, Stack said. CMEE includes a small project management piece to help generate such reports as which components have been reused the most, which developers have been most successful creating components and the like.

"The whole idea is to speed development times," Stack said. "When [enterprises] see the time-to-market shrink, they'll become addicted to this."

The CMEE interface brings up a "home page" from which users can get metadata and documentation for components, as well as a "chat" area that allows developers to receive feedback and advice from other team members regarding reuse or development of a component. Buttons allow users to access descriptions of languages and methods and other feature sets. The tool is integrated with Flashline's component marketplace, for teams that would rather buy a piece of an application than hand-code it; the Component By Design feature, for ordering custom components; and Flashline's QA lab, for testing the components.

Generally available Jan. 29, Component Manager's introductory price is \$60,000 for an unlimited server license fee, and an additional \$150 per month per user subscription fee. ■



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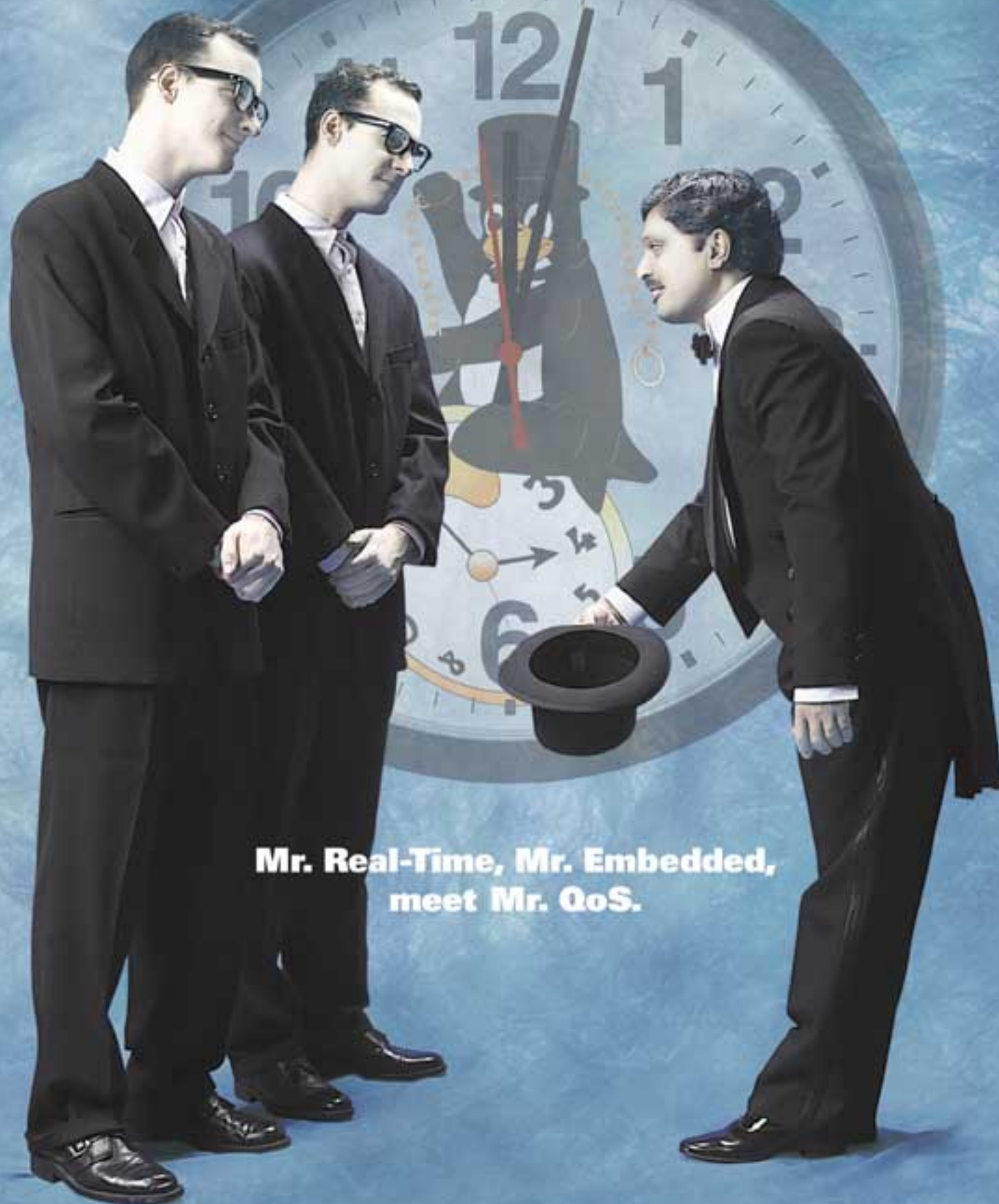
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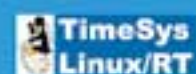
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ADS Says of Bitsy: Just Add Apps and Deploy

Yearlong partnership yields ready handheld target

BY EDWARD J. CORREIA

A yearlong partnership is about to bear fruit, a development that could reduce the design and delivery of Linux-based handheld computers to child's play.

Applied Data Systems Inc. (ADS), maker of the Bitsy single-board computer, and software developer Century Software Inc. have joined forces to deliver a preintegrated hardware and software target system that—except for applications—includes everything necessary for development and enterprise deployment, the companies announced at LinuxWorld in New York this week.

Bitsy is a single-board com-

puter based on the Intel StrongARM SA-1110 RISC processor that includes many of the most popular interfaces. First introduced late last year, Bitsy can run Windows CE, VxWorks, OS-9 or a version of embedded Linux modified by ADS to include its board-level drivers.

Century Software adds to the mix with its Microwindows, an open-source embeddable GUI that has just been ported to and integrated with the platform.

According to ADS, all a customer needs to add is an LCD panel, cables, an enclosure and applications to transform the 3-inch-by-5-inch board into any-

thing from a mobile medical computer to a warehouse data-entry terminal. ADS (www.applieddata.net) began shipping Bitsy in quantity last month.

Fred Salloum, ADS' director of sales and marketing, compared the simplicity of the Bitsy system to Palm OS-based devices. "If you strip the Palm of most of its applications, then I think you can make a strong correlation between the two. It brings a true application-ready system to the table so that customers can get to market quickly."

And although the Bitsy does not include scheduling and data-



The 3-inch-by-5-inch board is ready for an LCD, enclosure and software.

base applications, as do Palm OS-based devices, Century does bundle several basic applications, including a Web browser, terminal emulator, pop-up keyboard, an MP3 player and a hand-writing recognition engine. Salloum said that the system also includes MPEG1 video decompression and playback capability.

While similar devices exist that run embedded Linux, according to Salloum, few are quite like Bitsy. "You can correlate this to the [Compaq] iPAQ. There are other products out there that have Linux on top of the StrongARM platform, but they are finished, complete products. We are one of the only ones out there that have an OEM-level product that can be custom-fit." He said that ADS will customize the Bitsy board to order, adding or omitting interfaces as desired.

And according to Jon Beutler, Century's director of business development, his company (www.centurysoftware.com) is set up to cater to enterprise customers. "Our business model is

to supply engineering services if needed. There may be a customer who wants to spin something up quickly. Starting with a system that is ready to go, we can get to market very quickly," and will go as far as to develop the applications, he said.

"The Linux world at this point needs a lot of support and help," said Salloum, referring to the complexities of developing a device from scratch using embedded Linux. "ADS starts from the bottom up. We provide the hardware platform, all the low-level software and a port of the kernel itself." He added that Century takes the next step by putting in a Microwindows middleware layer that simplifies development and application porting from X-Windows.

"Bitsy is ready to start developing applications," using standard GNU tools, said Century's Beutler. "You turn it on, it starts up, and Linux and Microwindows are there."

The Bitsy board and software are available now for around \$300 in quantity. ■

Palm Paradise for Programmers

BY EDWARD J. CORREIA

For enterprise developers targeting Palm devices, a pair of new tools may put them on easy street.

First is Metrowerks Corp., which has released CodeWarrior for Palm OS Platform 7.0, the latest version of the tools that helped to build the original Palm platform. In addition to interface improvements, the tools reportedly now support debugging over USB for the Handspring Visor, which runs the Palm OS.

Enhancements to the IDE include a new find utility and C/C++ symbol browser; an improved linker that flags invalid PIRC files and checks code for blocks of reserved memory that exceed the Palm platform's capabilities; and enhancements to the debugger.

Available now for MacOS and Windows hosts, CodeWarrior for Palm OS 7.0 is priced at \$369 per developer seat.

Perhaps more significant to enterprise developers is the company's announcement that it is working on a version of CodeWarrior for Palm OS with the specific needs of enterprise developers in mind. The enterprise version will reportedly permit developers to create Palm applications that can access enterprise databases and applications.

The tools, which are scheduled for release in the third quarter, will include the standard CodeWarrior IDE, Java tools, a Conduit Development

Kit, third-party components and target support for x86 and 68K processors. Pricing has not yet been announced.

RADICAL PALM

For developers seeking a simpler way to develop applications for Palm devices, Java tools developer Data Representations Inc. (www.datarepresentations.com) has released Simplicity for Palm OS, a RAD environment that the company says permits developers to create Java applications using drag and drop.

Based on Simplicity Professional, the company's general Java RAD environment, applications are created by dragging items from a palette and assembling them using visual tools. According to Carl Sayres, Data Representations' chief architect, what mainly sets Simplicity apart from sim-

ilar tools is its "execute-on-the-fly" feature. "It lets you test your code as you write it. You write a line of code and immediately see what it's going to do. That's a very powerful technology which none of our competitors have."

Sayres added that all the tools adhere to Sun's Java 2 Micro Edition, CLDC and Spotlet specs, ensuring that the files created will work across Handspring Visor, IBM Workpad, Palm III and V platforms and others.

Another advantage, Sayres said, to using Simplicity tools is its Palm simulators, which are written in Java, and offer infrared and database simulation.

Simplicity for Palm OS is available for \$695 per named developer. Simplicity applications for Palm OS require the KVM, a free download from Sun. A free trial version also is available. ■



The Bitsy board with Century's software is analogous to a Palm OS device, says ADS' Salloum.

SND RELEASES 'NETWORK-READY' WEB APPLIANCE KIT

BY EDWARD J. CORREIA

Embedded microelectronics start-up SND GmbH has released the Micro WebTarget StarterKit, a preintegrated hardware and software development toolkit that the company said provides everything required to build a wide range of small-footprint, resource-constrained embedded Internet devices.

Based on its Micro WebTarget, a CLDC-compliant, 32-bit Hyperstone RISC processor and DSP reference platform

released last year, the kit includes the Hyperstone HyNetOS network operating system, C development tools and device drivers for various I/O interfaces. The kit reportedly now includes a TCP/IP stack, a serial debug port, an Ethernet 10BaseT interface for host-to-target communications and two hardware expansion ports. Optional software includes Web server, and e-mail, FTP and HTTP client capabilities.

Hardware options include

dual RS-232 ports, a USB port and a PC Card modem host port. The standard board includes 4MB DRAM and 1MB Flash memory. Windows 9x/NT/2000-hosted development tools include a C compiler and linker and work with the Java 2 Standard Edition version 1.22 or higher. According to the company, the TCP/IP stack is integrated within HyNetOS, which is based on the hyRTK multitasking real-time kernel and provides a protocol and

device manager. The system will run any combination of C and Java applications, the company said.

Available now directly from SND (www.smartnd.com), the WebTarget StarterKit sells for \$2,295 plus royalties for HyNetOS. The company also offers a mobile version of the kit that adds an LCD and cell-phonelike keypad for \$3,400. Prices include documentation and one year of developer technical support and updates. ■

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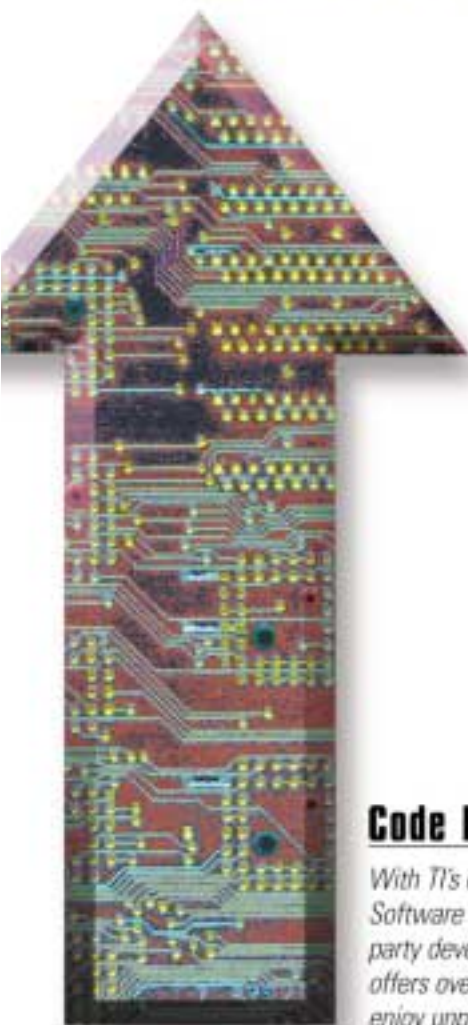
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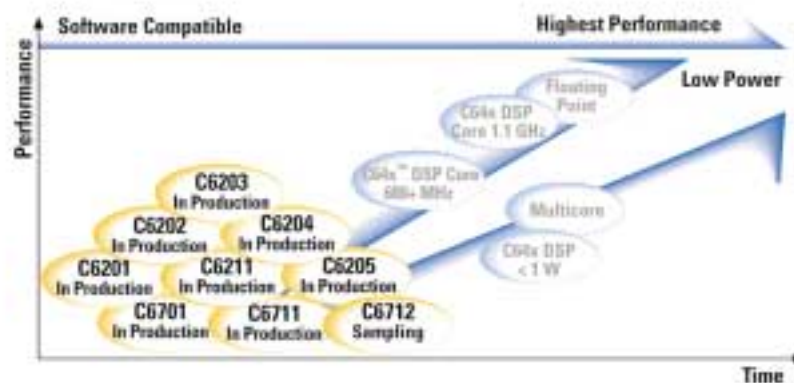
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EnableWorks SDKs Bring Remote Users Close to Home

BY EDWARD J. CORREIA

Embedded software developer Metro Link Inc. has released EnableWorks, a connectivity software development kit that the company says can act as a communication conduit among disparate systems, such as residential devices and appliances, and connect them via the Internet to enterprise data and services.

Originally unveiled in November 2000 as project Matrix, EnableWorks is a set of Java 1.1-compliant components that reportedly permit dissimilar residential devices to interop-

could probe device information such as make, model and serial number and compare it with back-end systems, sending alerts about warranty expiration, product recalls or software updates.

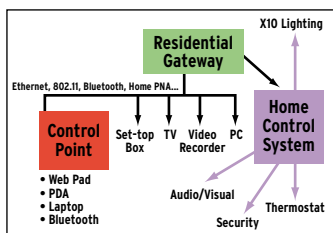
According to Bob Zinn,

Metro Link's director of marketing, the SDK will support only the Transmeta Residential Gateway and Aegis Home Management System. Around midyear, Metro Link (www.metrolink.com) is scheduled to add support for

the Home Audio/Video interoperability (HAVi) standard, Open Services Gateway initiative (OSGi), Sun's JINI and VESA Home Network (VHN), he said.

The SDKs for Transmeta and Aegis gateways are avail-

able now. Per-seat pricing is dependent on target configuration. A runtime license fee also applies, which Zinn said can be considerably less in large volume than the company's original 50 cent target price. ■



EnableWorks lets all manner of equipment communicate locally and with enterprise systems.

erate via Universal Plug and Play (UPnP), an appliance communication protocol initiative being driven by more than 250 companies.

The system consists of three main components. The UPnP SDK includes a gateway and protocol stack; the Control Point SDK lets developers communicate with and control connected devices; and the ML Services for UPnP includes a programmatic timer, script engine and configuration GUI.

According to Rob Lembree, Metro Link's technical director of automation products, the EnableWorks development environment can help enterprise developers build solutions for field offices equipped with residential gateways, or to get office equipment connected.

"For example, the protocol stack could easily go into a laser printer," said Lembree, enabling the device to "magically appear on all the desktops in the office." Lembree cautioned, however, that the UPnP 1.0 specification is still without security.

Another application for the technology would be as a means to track inventory, Lembree said, whether it belongs to a company or a consumer. Gateway applications

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Zucotto Offers J2ME-Certified SDK for Free

BY EDWARD J. CORREIA

Zucotto Wireless Inc. has released the Whiteboard Software Development Kit, Standard Edition, a free wireless development environment for

Java 2 Micro Edition.

According to the company, the software has passed Sun's compatibility tests for the Connected Limited Device Configuration (CLDC) 1.0 specifica-

tion and the Mobile Information Device Profile (MIDP) 1.0.

According to Louanne Capello, a product manager at Zucotto, using Sun-certified tools gives developers a clear

advantage. "Now certified, we feel we can offer developers the tools they need to design and test MIDP-compliant applications before the hardware is actually available," she said.

When combined, the CLDC and MIDP can be used to create a J2ME application runtime environment for mobile devices such as cell phones and two-way pagers. Zucotto offers the tools for free to drive demand of its hardware, including its flagship Xpresso Java accelerators and microcontrollers.

Zucotto made headlines in December 2000 when it released the XJB 100, claiming it to be the world's first Bluetooth stack written in Java. The company said it will begin licensing the stack early this year. Zucotto Whiteboard Standard Edition SDK can be downloaded for free at www.zucotto.com. The company also offers a fee-based SDK for Bluetooth based on Whiteboard, which includes a Java Bluetooth API, a Bluetooth communications stack and two Bluetooth communications boards. ■

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"I created PVCS... but now I use StarTeam."



CODEWARRIOR 6 AT LINUXWORLD

BY EDWARD J. CORREIA

Development tools company Metrowerks Corp. was showing off the latest beta of CodeWarrior for Linux 6.0 at this week's LinuxWorld conference in New York. Set for release this month, the new version will include a Java RAD environment, add support for concurrent compiles and broaden its Linux distribution support.

According to John Smolucha, Metrowerks' vice president of marketing, the most significant improvement in version 6.0 is its ability to perform concurrent and distributed compiles. "If you have a lot of files in a build, it adds a dramatic performance improvement to that process," he said. And with support for parallelism, CodeWarrior now can take advantage of multi-CPU systems and can distribute compiles across multiple systems in clustered computing environments.

With this release, Metrowerks (www.metrowerks.com) will support hosting on multiple Linux distributions in a single box, a departure from previous distribution-specific releases. According to the company, version 6.0 has been tested with Caldera, Red Hat, SuSE, TurboLinux on x86 processors and on Yellow Dog Linux for MacOS on PowerPC, and an identical list of targets. Pricing has not yet been announced. ■



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Does WML Development Make Sense?

Limitations of wireless devices
and disparate gateway types
hamper creation of applications

BY LISA MORGAN

The Wireless Application Protocol (WAP) lost some of its luster last year as a result of gateway interoperability problems and a fragmented handset market. The lack of Wireless Markup Language (WML) tools still plagues developers, and not everyone agrees about how wireless applications should be developed. Some advocate WML-specific development, while others call it a waste of precious resources. WML proponents or not, many developers want to extend their applications out to wireless devices, which requires a different type of thinking.

"Early WAP was an application viewer that was not integrated with other functions," said Paul Chappelle, manager of U.S. business development at Nokia. "WML was not designed to be a great markup language—just a component of XML."

Unlike XML development for desktop applications, WML development must take into consideration all the limitations of handheld wireless devices, which include a small footprint and screen plus low memory and bandwidth, in addition to gateway types and a wide range of end devices.

"Wireless development is tough," said Nicolas Lorain, senior product manager of wireless Java technologies at Sun Microsystems Inc. "As far as standards go, wireless devices are worse than PCs.

Every cell phone manufacturer is developing its own system."

According to Chappelle, every device reacts a little differently and the size of a file can greatly affect the speed of the data, which developers must keep in mind. Packet length is also an issue as it creates gateway interoperability problems.

"When you develop wireless applications, they need to be very efficient from the start," he said. "You want to reduce the number of buttons a user has to push and [consider] the user interface and presentation of data. Wireless users are not very forgiving."

One reason users are not forgiving is a matter of expectations. The wireless Web hype has led users into believing that they can surf the Web as easily from their cell phones as from a desktop computer. The reality is, there is very little Internet content readily accessible by handheld devices, and even the WML pages that are available are text-based. Users frustrated with the lack of content also complain that the phone keypad is inefficient for popular traditional Web applications like searching and responding to e-mail.

Vendors say there are several reasons why application development tools are falling short. First, there is no single wireless standard in the U.S. In the case of markup languages, there are WML, Handheld Device Markup Language (HDML), and Compaq HTML (which is used in NTT DoCoMo's i-mode service), for example. Second, wireless standards are evolving so rapidly that development

tools may become obsolete by the time they hit the market. And last, the size of the WML development market is in question, given that WML is an XML application.

Jonathan Rendy, vice president of product marketing for testing at Mercury Interactive Corp., points out that differences in markup languages, protocols and microbrowsers complicate application development, as does the addition of a WAP browser.

"Testing is really important for wireless applications," he said. "If you develop a WML application, even though it's a standard you have to make sure you test it on all the devices. What works on a Nokia phone may not work on an Ericsson."

The WAP Forum's WAP 1.2.1 standard provides for interoperability testing; however, vendors warn that despite the availability of interoperability tests, handsets and gateways from different vendors are not necessarily interoperable. Even different versions of the same product may not be interoperable.

Beyond standards and interoperability there are other design considerations to consider in wireless applications, such as abstraction. Nokia's Chappelle points out that in a mobile user interface, what gets sent to the handset is very important, which is why wireless developers have to be very diligent and streamlined in their approach to development.

Another design consideration is paid access time, which is very expensive compared with Internet access. As a result, users will look for quick access to information and applications that don't require them to be continually connected.

Novell Inc. is approaching WML from a "one Internet" standpoint. The company's Groupwise Web Access product enables wireless access to groupware applications, such as scheduling. Kevin Crutchfield, software engineer at Novell, said that instead of hard coding WML applications, Novell spent its time developing templates (aka style sheets) that supported mobile-friendly features.

"We realized that some [GroupWise] features don't make sense [for a mobile application]," said Crutchfield. "In our case, we have information in a directory or store that needs to get out to users wherever they are."

Novell will include Web Access to GroupWise as part of the product, as opposed to selling it separately. Crutchfield said that from a user perspective, this is more palatable than having to buy individual products that need to be managed separately.

TO CODE OR NOT TO CODE

Some developers advocate the development of separate WML applications while others advocate broader XML development, which is then transformed into WML applications. The

► continued on page 30

2001: A Tool Odyssey

BY LISA MORGAN

WML tools are not exactly plentiful, but at least familiar companies are providing developers with some viable options. BEA Systems Inc., Macromedia Inc., Microsoft Corp., Oracle Corp. and Sun Microsystems Inc. are among the first to enable WML development. Vendors say more tools are coming in 2001.

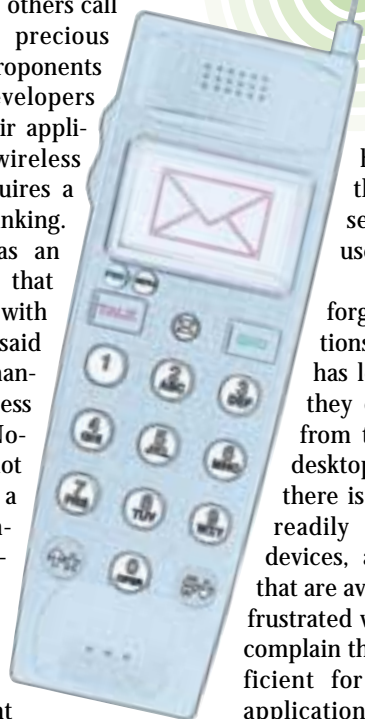
POINT-AND-CLICK WML

Wouldn't it be nice if Wireless Markup Language (WML) development were as easy as exporting data? After all, HTML, XML and WML tags all differ, not to

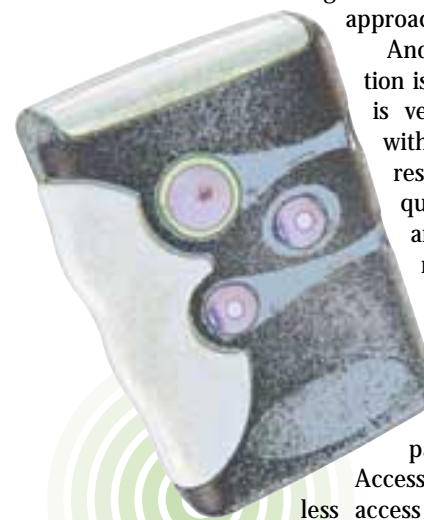
mention the other markup languages designed for wireless applications.

One way around the language problem is transcoding, which transforms an XML or HTML application into WML. Oracle offers Oracle 9i Application Server Wireless Edition, and IBM offers WebSphere Transcoding Publisher 3.5. Oracle 9i transforms XML into WML. IBM's WebSphere Transcoding Publisher transforms HTML and XML pages into Handheld Device Markup Language (HDML) and WML. The purpose of transcoding is to enable developers to create Web

► continued on page 29



Interoperability testing is important for wireless apps, says Mercury's Rendy.



TOOL ODYSSEY

◀ continued from page 28

content once and then adapt it to mobile devices. Like other shortcuts, the method may not be universally suitable, especially for complex applications and content.

DEVELOPMENT WITHOUT A HANDSET

There are two reasons why a developer would want to develop a cell phone application on a PC. First, the handset might not be available as soon as development tools for the target device are. Second, "concept" handsets can be prohibitively expensive.

Nokia (www.nokia.com) has two simulators that mimic actual phone models. The first ports phone software to a PC so developers can see what their applications will look like on a handset without having to purchase one. The Blueprint Simulator includes a concept phone and supports the WAP "Push" specifications.

Nokia's WAP Tool Kit is designed to help developers better understand and develop for WAP and XML specifications. It includes tools for creating WML and WMLScript content, adding WBMP graphics and debugging WAP

applications. Matt Bolpi, Nokia's WAP Tool Kit product manager, said the tools often give developers their first practical view and experience with the latest WAP specifications.

Nokia also offers the Nokia Activ Server 2.0, which is a software platform that provides mobile connectivity to existing information systems and services. Nokia Activ Server 2.0 Professional Edition is available now; the Enterprise Edition is slated for release by March.

In addition to offering its own WAP solutions, Nokia teamed up with Macromedia and BEA to expand its tool offerings. Nokia WML Studio for Macromedia Dreamweaver is a graphical tool set that enables Dreamweaver developers to author WML content for handheld

WAP devices, including Nokia phones. It tracks the compiled size of WML decks and includes a debugger that validates WML code as it is created.

The BEA WebLogic M-Commerce Solution enables enterprises to run common business logic on PCs and wireless devices for serving all client interfaces—including conventional browser-based PCs as well as WAP-compliant devices.

MICROSOFT GOES MOBILE

Microsoft offers some server-side mobile controls that enable developers to create

a single user interface that can be viewed on multiple devices in the .NET Mobile Web Software Development Kit (SDK) Beta 1. The next version will enable developers to graphically create mobile Web forms that can be used for programming purposes like forms in Visual Basic. Developers simply add a form to a project, then drag and drop controls into it. The mobile controls and Web forms will be able to generate WML content for various devices, such as cell phones and Pocket PCs.

WML THE XML WAY

WML is an XML application, and that's how SoftQuad Software Ltd. (www.softquad.com) is approaching WML development. The company's XMetaL platform supports different applications so developers can develop in XML and then adapt the content or application for WML. According to Bruce Sharpe, chief technology officer of SoftQuad, XMetaL could be used to do wireless development only, but parallel development is a better description. SoftQuad does not currently offer WML-only tools; however, it enables XML developers to organize content and articulate it once, then handpick the output format, including WML.

AND DON'T FORGET JAVA

Not surprisingly, Sun's answer to wireless development is—you guessed it—Java. For example, in Java you can display maps and animation in color as well as driving directions that are cached on a device. Java isn't intended to replace a WAP microbrowser; however, Nicolas Lorain, Sun's senior product manager of wireless Java tech-

nologies, asserts that Java provides a better interoperability module for graphic applications such as games or transactions.

The WAP Forum is pushing WML Scripts as opposed to JavaScript, saying that the two are similar but that WML Script is optimized for use in "modest" handheld wireless devices.

TESTING, TESTING

Empirix Inc. (www.empirix.com)—formerly RSW Software Inc.—has a test suite for WAP that includes e-Tester, e-Load and e-Monitor. e-Tester does functional and regression testing; e-Load measures the effect of the load on application performance; and e-Monitor tracks performance 24/7 following deployment. ■



SEEKING ORACLE FOR ADVICE

Jacob Christforth, OracleMobile



Jacob Christforth, chief technology officer of OracleMobile, has been developing wireless applications since 1987. He says that both he and Oracle have learned what works the hard way.

SD Times: Do you think wireless development is harder than Web development, and if so, why?

Jacob Christforth: Wireless development is more difficult because it's unforgiving. You can make mistakes in HTML or XML, and Web pages will still render. In the case of wireless, you have a lot of target devices to consider, and you have to be very accurate.

What is your opinion about WAP and WML?

WAP is an important networking protocol. There really isn't any alternative to it except NTT DoCoMo. WML is not a language developers want to write natively to nor is it an application development model.

What does make sense for WML development?

Traditionally, you've had two choices: Translate HTML into WML, or write natively. HTML translation doesn't

work because the original application or content was developed for a different form factor and target user. Writing natively takes time, it's expensive, and the number of new devices continues to grow. It makes more sense to develop in XML and then translate to WML.

If you're developing in WML, you have to take limitations like screen size, bandwidth, memory and processing power into account. Assuming you're developing an application in XML and then want to translate it into WML, what else do you need to consider?

You need to think about what makes sense. There are some things you will do in your office and other things you will do on a mobile device. If you're house hunting for example, you might ask for a listing and possible pictures of houses that have blue roofs in a certain ZIP code. If you visit a house, you might want to tap in from a mobile device to get another local address or price. When you're mobile, you want very specific information.

Are you saying that wireless applications are conceptually different?

Yes. You need to think carefully about your business and about how your user will access information. Where is the user? What is their current state when they access information such as a bank balance?

Do you think developers are thinking this way yet?

Not all of them. A lot of people just want to translate their current application into a wireless format, but it doesn't work. You end up with technical problems. A desktop application is the wrong application for a wireless device and vice versa.

Are you finding yourself educating customers about how to develop wireless applications?

Yes. A lot of companies want to translate their applications directly into mobile applications, but for 99 percent of those companies, mobile is not their only business, so you need to think about your applications in terms of both Web access and mobile access. Not everything will make sense for both.

Mobile development presents several barriers for enterprise developers: lots of

target devices, different methodologies, rapidly changing standards, a lack of in-house expertise and a lack of tools. What's Oracle's solution?

We believe that tools will increasingly be made available online through service providers.

OracleMobile is providing solutions and services that help service providers and corporate customers deploy wireless solutions. 9i is a mobile application server that carriers are using to create mobile portals. OracleMobile provides servers and a WAP gateway as a hosted service so customers can avoid the complexity. We also bundle products into a single hosted service.

How are end-user expectations going to affect wireless application developers?

People are going to expect that they can access relevant subsets of information and services from their mobile devices.

If you don't provide mobile access to what customers want, it's going to be a problem. —Lisa Morgan

WML DEVELOPMENT

← continued from page 28

argument in favor of WML development is not necessarily based on the fact that WML tags differ from XML tags. Instead, many developers have existing HTML applications that don't lend themselves to

wireless devices. There are transcoders that transform HTML to XML and then WML. The problem is, most HTML applications were not originally designed to accommodate the limitations of mobile devices.

The other approach is to develop in XML and then

transcode the application into WML. Some say this is a better option because it enables developers to create an application once in XML and then transform it to WML or HDML without having to rebuild applications. But again, this is not necessarily a straight translation. Wireless applications have

to be developed with wireless devices and the needs of mobile users in mind.

"You have to think about how your users are going to use cell phones and the mobile Internet," said Jeremiah Zinn, head of collaboration at Ericsson Cyberlab. "Wireless applications are much more target-

ed than typical Web applications. Most people are just trying to adapt their existing applications to the wireless space and the applications are not impressive. Wireless users require different applications and services [than traditional Internet users do]."

According to Zinn and Danny Wyatt, one of Nokia's lead developers, the next generation of mobile applications will have unique characteristics that combine location (via GPS), personalization, transactions and more sophisticated communication techniques. But it's going to take years before your cell phone offers you a beer at a football game, argue other observers who are concerned about wireless payment processing standards, privacy and network infrastructure.

"Do you have any idea how long it's going to take before all the towers are in place for these wireless applications?" asked Brad Baldwin, director of broadband access at International Data Corp. "You're talking a matter of years, not months."

Security is also an ongoing concern. The WAP standard currently provides for authentication and encryption, but that doesn't provide enough security for all applications. According to the WAP Forum, the next release of WAP will include end-to-end security and support for PKI.

"If you're developing a secure financial application, you need to be aware that there is a breach in the WAP mode," said Sun's Lorain. "WAP gateways may do some protocol conversion. If the data is extracted from IP, it's open for a brief moment before it's encapsulated. Some carriers are addressing the problem using firewalls, but it's something a developer needs to keep in mind."

Wireless developers have a lot of things to keep in mind: target device limitations, user requirements, security and how wireless applications fit into their overall software development strategies. Although some first-generation wireless applications may only be crippled versions of existing HTML or XML applications, vendors expect developers to start thinking about wireless applications on their own terms. Evolved thinking, they say, will result in better tools and applications. ■

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EDITORIALS

Can WAP Live Up to Expectations?

End users are a funny breed. They've forgotten the 10-minute boot cycles from their old 1981-era IBM Personal Computers, the joy of watching a spreadsheet recalculate one cell at a time, and the snail-like downloads they experienced with 9,600-, 14,400- and even 33,600-bps terminal sessions. Those on high-speed corporate networks or with broadband connections at home don't even remember V.90, except when they're checking e-mail from their hotel room.

So, there should be no wonder that initial customer experiences with Wireless Application Protocol technology, as published in the general press, have been unsatisfactory. The players in the market—from telephone makers to infrastructure service providers to Web portals—all implied that the WAP-enabled Internet is just one Touch-Tone away. *Au contraire*. Early adopters learned that WAP devices are slow, bandwidth is constrained, page loads take forever, and WAP-enabled applications are scarce. And telephone keypads are lousy for typing on.

That isn't the only challenge facing WAP. A bigger issue may be compatibility. Even though interoperability tests are available, vendors are not convinced that multivendor compatibility can be achieved with the WAP 1.2.1 specification.

Our advice to the WAP Forum and its vendor members: Make interoperability Job No. 1.

And to wireless developers: WAP is a rapidly evolving technology, and what you build today might be obsolete in just a few months. That doesn't mean that you should avoid WAP or abandon your wireless aspirations—but test the waters (and your vendors' claims) before diving in.

The Price of Vaporware

Nearly six years ago, pundits and competitors castigating Microsoft Corp. for the interminable delays in its Windows 95 operating system. The jeers were repeated in 1998 and 1999, as the development of Windows NT 5.0 dragged on. But the Redmond giant has no monopoly on vaporware, as customers have been waiting for key new products from Apple Computer Inc. and Borland Software Corp. for just as long. Perhaps longer.

Apple's MacOS X, the newest version of the operating system, was announced on March 11, 1998, and in the words of the original announcement, was "a new advanced version of the MacOS which will be available to developers in early 1999 and ship in the fall of 1999." Forget that. Try March 24, 2001, instead.

Borland's Project Kylix, announced on Sept. 29, 1999, (back when the company was still known as Inprise) was to build versions of the company's popular C++ Builder and Pascal-based Delphi rapid-application development environments for Linux. At first, Inprise insisted that Kylix would ship in early 2000, but the date immediately began to slip steadily backwards. Finally we're told that the Pascal version—Delphi for Linux—is slated to ship the middle of this month. There's still no ETA for the C++ version of the IDE.

Perhaps these new much-awaited shipments can help bolster these companies' lagging fortunes. After all, it takes more than amazingly great products to make a successful company. It takes customer confidence as well. Missed deadlines for aggressively hyped flagship products won't help. ■

GUEST VIEW

WIZARDS, GURUS AND SAINTS

Software development is a strange business. Often the success or failure of a development effort hinges on the talents and support of a few key individuals in an organization—usually the highest paid and most highly sought after individuals. These "indispensable" people seem to fall into three broad categories: Wizards, Gurus and Saints (WGS). As will become apparent, these roles will often need to change to permit a transition from entrepreneurial efforts to a well-managed firm.

A Wizard is the individual on a project who is aware of all the magical incantations that are necessary to get a particular section of the system to operate properly. No one would think of working on this particular part of the system without consultation with the Wizard. Wizards are typically very talented people whose desire to complete a project can assist the entire team in overcoming many initial obstacles.

While there is no question that many projects have died on the vine due to slow market emergence, once a product has moved into maintenance, the company needs a reduced dependency on Wizards. Wizards have the notorious reputation of performing their magic for the highest bidder, thereby taking with them critical system knowledge.

The second key individual in an emerging organization is the **Guru**. These people have the understanding of why the software was initially created. Just as a Wizard would always be consulted on a matter of code, the Guru would always be consulted about requirements. The "wisdom" of the company, normally represented by the requirement base presented to development, is again captured primarily in the head of one or a few core individuals.

There is little time in an initial development effort to record all requirement changes. Often the only way to capture all of these changes is to hold them in your head, which is quite flexible but rather difficult for others to access. Thus, like Wizards, Gurus will be petitioned by many disciples. Since much if not all of the sys-

tem understanding is captured in the Guru's head, when they are promoted or hit by a large moving van there is little probability that anyone else will take over the Guru's role.

Finally, **Saints** are necessary for any company to survive past infancy and will oftentimes



**BEN
LIEBERMAN**

come bundled with either a Wizard or Guru. Simply stated, a Saint is someone who is willing to sacrifice for the good of the company. They will work long hours, step up for heroic efforts and rally the team by performing miracles.

The main drawback to a Saint is that they are human. If you increase the workload beyond an individual's capacity, there will be an often-disastrous drop in productivity. While emergency situations still occur, a heavy reliance on a few key Saints is a dangerous way to run a business; Saints have a nasty habit of becoming Martyrs.

All of these individuals seem to play a vital role in the survival of the initial project, so why would you want to avoid them? In the short term, survival is key and a top-flight Wizard, Guru or Saint will be necessary for success. It is only during the transition to a larger, maintainable system that this approach falters and ultimately fails. Inevitably, systems become increasingly complex, so that eventually they will overwhelm the most talented Wizard, bewilder the wisest Guru and martyr the most dedicated Saint. So how can we transition from highly flexible but limited, to a more rigid but stable process?

It is not simple for a company to recognize and begin the transition from entrepreneurship to a well-managed firm. The cost of beginning too soon or too late is high, and potentially fatal. It is therefore critical to develop ways to recognize the initial signs of difficulty and create methods to reduce the pain involved in reworking the firm.

Eric Flamholtz of the UCLA Anderson School of Management notes that at a point roughly between the range of \$300,000 and \$3 million in total revenue, a software company will begin to experience significant "growing pains." These are evidenced in the behavior of the individuals

that compose the company, as well as the quality of the product and ability to deliver on schedule. It is key at this point that the company begins to develop a "professionalized" working environment, and part of that means turning Wizards, Gurus and Saints into Engineers, Architects and Managers (EAM).

TRANSITIONING ROLES

A Wizard captures within himself or herself the magical incantations hidden deep within the fabric of the code universe. These mysteries must be explained, so as the project stabilizes a Wizard becomes an **Engineer**. Engineers work best with a defined path and established, best-practice procedures. Some of the costs and benefits of this transition are establishment of a uniform process, easier transmission of process and system structure information to new employees. On the other hand, Engineers foster a more deliberate pace of development, restricted innovation opportunities and require multiple information sources for the full-system picture.

Since a Guru represents the wisdom of the system, the natural transition type is the **Architect**. This transition is represented by the need to capture and publish the system-level knowledge.

The final transition to discuss is the Saint to a **Manager**. At some point the workload required to keep the system alive surpasses the human ability to go without sleep. The work must now be organized and delegated to a team of people for execution. Managers, however, have the potential for personal conflicts, can be a bottleneck and of course, add overhead.

The need to document, model and distribute information about the company's problem domain is a growing reality in our industry. By looking at the roles and responsibilities of each member of the organization, it will be possible to alter and grow those roles—from WGS to EAM—which will better suit the increasingly complex world of software development. ■

Ben Lieberman is a senior software architect with Blueprint Technologies Inc. Reach him at blieberman@blueprinttech.com.

AND ANOTHER THING...

POOF!

"In the meantime, we were obliged to live in a world that we knew to be unreal, or at least transient." —*The Industry Standard*, Dec. 25, 2000

We're living in a time that Aesop would have enjoyed. Dot-coms are rapidly piling up in mounds as dot-gones. In an updated version of the old fable, the hare—in this case the New Economy—was running way ahead of the Old Economy until it ran into a redemptive stock market that grabbed the rabbit, took it behind a building and beat it senseless. Meanwhile, here comes the tortoise of the Old Economy, steadily plodding by to the finish line.

My favorite dot-com was gazoontite.com, a Web site with several high-rent physical stores that resold allergy remedies, foam pillows and the like. According to the company's Dec. 14, 1999, press release announcing \$26.5 million in financing, "gazoontite.com has made impressive inroads in the untapped and underserved 'breathing' market to date." Now that should be a market

big enough to please any venture capitalist. John Hummer, of the well-respected VC firm Hummer Winblad, plunked down his company's millions, saying, "gazoontite.com has demonstrated great leadership and vision in creating a new consumer market for breathing." What were they thinking? The fall obituary for gazoontite.com can be read at www.upside.com/graveyard.

What is interesting about the dot-com implosion is how difficult it was to manage emotionally driven perceptions in the face of intellectual realities. We all knew the bubble was going to burst. We knew it didn't make sense that you could have a stock market spiraling ever upward with no profits in sight. We heard all the adages about the electricity market, the railroad boom and the long list of early auto manufacturers. We knew intellectually. Why did we ignore it? Was it that we sensed history being made? Or that we were afraid of being left by the



TED
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side of the road while the bandwagon roared by without us?

Even the very seasons themselves, with complete intellectually assured inevitability, challenge the tug of our emotional perceptions. It's dead of winter here in Oyster Bay, New York. There's about a foot of snow on the ground. Ice. Wind. I walk outside and know that in six months the snow-covered sidewalks will be hotter than a skillet. In half a year I will be sweating, praying for the sun to go down and for a cool breeze—any breeze—to cut the humidity. But I can't imagine it. I know the weather will be radically different, but I can't feel it. I can't override the feeling of freezing right now. It's part of human nature.

So, what does the dot-com meltdown mean to you, the software development manager? Less envy and more work! The responsibility for e-business development is back over to you! One of the characteristics of the dot-com mania was that Old Economy companies were mortally afraid of being destroyed or (gasp!) disintermediated by a couple of 22-year-old grad students chowing down pizza and

Jolt Cola in some Stanford dorm. They felt they had to abandon all rational, normal (and, they thought, slow) ways of building a big new application (their e-business site) and hire outside consultants to get them up and running immediately.

Even the old-line consulting firms seemed to have too long a time line, so the line-of-business managers and CEOs fell all over themselves lining up hot new consultants like Viant, Scient and Razorfish. Together, without those bothersome IT managers, the C-level managers and the consulting 25-year-old MBA-sporting uberNerds would give the project top priority and ramrod it through, and...

Poof!

The dot-com threat to the Old Economy is over. And this means the CEOs can go back to being CEOs, the line-of-business managers can go back to managing their line of business, and IT development managers can get back to building their company's e-business applications in a rational, methodical, legacy-system-including way. You get to pick up the pieces, but at least you're back in the driver's seat. Congratulations! Gulp. ■

Ted Bahr is publisher of SD Times.

LETTERS TO THE EDITOR

THE OTHER SIDE OF
OPEN RTOS

I am writing you to share my perspective on your piece ("RTOS: Not an Open-and-Shut Case," Dec. 15, page 23). I felt that some rather biased statements in that piece went unquestioned.

In particular, when [Wind River Systems vice president] John Fogelin states, "Once you provision yourself with all this open source, you still are not quite where you want to be. After you get through the first step of getting it all onto your machine, you have to go through a considerable amount of work to turn that into the appropriate platform for embedded development..." and Microware's Curt Schwaderer continues later in the same vein by saying, "What people didn't realize is that it takes quite a bit of engineering horsepower to sift through the mountain of code to extract the pieces that you need and fill in the holes to create a product. What I've seen is that only the larger organizations that have up-

wards of 20 engineers or more at their disposal can be successful with an open-source solution..." they play upon the assumption that companies like MontaVista and others don't even exist, let alone provide open-source software offerings, preconfigured to use in embedded systems, on a par with or better than Wind River with VxWorks or Microware and the moribund OS-9.

As for time-to-market, Linux addresses far more embedded configurations and requirements off-the-shelf than does VxWorks or OS-9.

It is important to note that most developers who state a desire to have the source code have no desire ever to modify it.

Subsequently, assertions are made that the GPL is dangerous, and these assertions go uncountered: "...opponents of open source say that commitments under the GPL and other public licenses require companies to return their source code to the community, essentially handing a company's differentiating software to

competitors." False. The GPL is a covenant between the code supplier and his customer only. "The GNU license is a virus. It is very explicit in the ways in which you are allowed to deploy that software, and it states quite explicitly that if you ship a system with GPL code in it, the portions of the system that interact with that GPL code also have to fall under that GPL or you lose the right to ship the GPL code." False. "Interaction" is not a valid licensing criterion. The criteria are static linking to pure GPL code (e.g., the Linux kernel) and modifications to LGPL and/or GPL code itself. Linking to LGPL code (as Wind River well knows, since they distribute LGPL code) carries no redistribution onus. "For those product companies that are interested in valuing the software component of their product, it can expose the company to loss of intellectual property rights and control over their value." False and silly.

MontaVista and others do not just provide support, either, but complete product

lines with equal or greater technology, tools, middleware, utilities and application components for embedded applications than do most proprietary embedded executive suppliers. We do this as a result of our core competencies (MontaVista has over 1,200 man-years of embedded, real-time and Unix systems experience), and we build on the immense depth and breadth that open-source Linux, a "real operating system," brings to the embedded space.

William Weinberg

Director of Marketing
MontaVista Software Inc.

CORRECTIONS

• The URL for Tower Technology Inc. was incorrect in a story in the Jan. 1 edition ("Tower Tackles Performance Issues," page 12). The correct URL is www.towerj.com.

• The UltraSuite development toolkit from Infragistics Inc. is available on a yearly subscription basis for \$1,495. The price was incorrect in a story in the Jan. 15 edition ("A .NET Gain for Sheridan, ProtoView," page 1).

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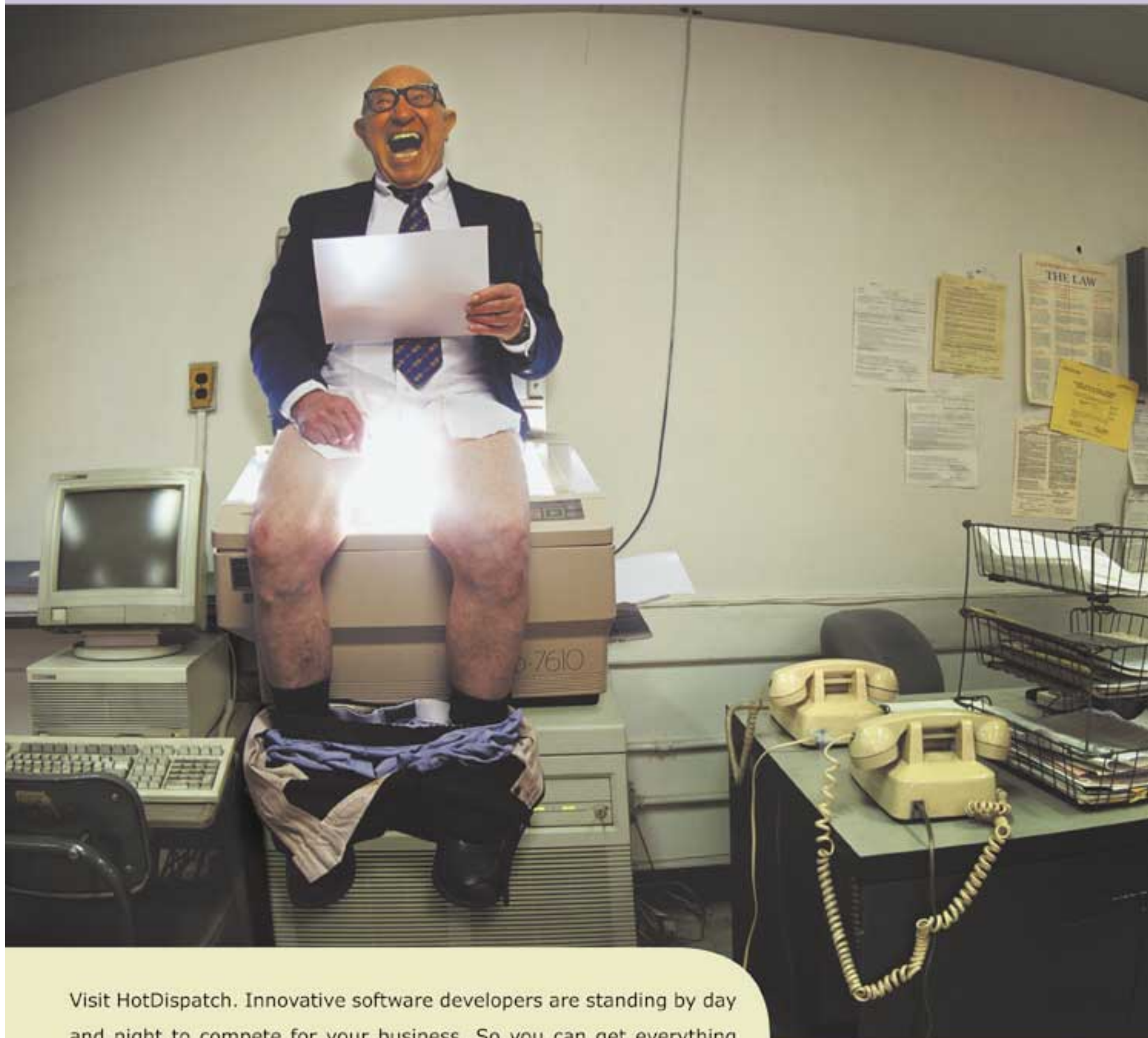
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WHERE'S THE ROAD CODE COMPETITION?

Considering the public's love affair with handheld computers, it's a decent bet that many of you are involved with a Windows CE 3.0 development project of some type or other. And while I've covered the nuances of Windows CE 3.0 in a previous column ("Big Platform, Small Footprint," Dec. 1, 2000, page 39), I didn't get very far with development strategies specific to this highly mobile, not-so-little operating system. Frankly, even before the .NET furor appeared, Microsoft has churned out considerable work in making your life easier with regard to Windows.

For one thing, you've got a choice in Microsoft development platforms that spans from C++ to Visual Basic. Previously, you'd have been working with Visual Basic 6 and adapting that language to the CE mindset, but with the release of Windows CE 3.0, Microsoft also released some dedicated development platforms—not the least of which is eMbedded Visual Tools, which happens to include eMbedded Visual Basic (MVB) 3.0 and eMbedded Visual C++ (MVC++) 3.0.

For another, Microsoft has broadened CE's applicability to real life significantly by expanding the operating system's horizons across multiple devices.

The Pocket PC is probably the best-known CE recipient, but is followed closely by the Handheld PC (which differs from Pocket PC primarily in its support for keyboard input and that it still runs only on Windows CE 2.11), as well as the still-kicking Palm Size PC (which is on its way out). In addition, CE is a solid gaming platform supporting not only Microsoft's new hardware console, but Sega's Dreamcast as well.

Now that there is a reason to develop for CE, let's get back to languages. MVB 3.0 has a number of advantages over using standard VB, including a dedicated IDE specifically designed for Windows CE programming, which includes CE-specific help files and documentation. The IDE is integrated with Windows CE operating services and even has an MVB Form Designer for straight visual dragging and dropping. That, in turn, is boosted by IntelliSense to allow dynamic error- and syntax-checking and other on-the-fly language information.

Like most VB projects, however, Visual Tools has aimed MVB at RAD-type application development where speed and convenience are of the

essence. For more in-depth applications, Visual Tools also includes eMbedded Visual C++ 3.0, which is probably the most robust Windows CE development environment I've ever seen. Similar to MVB 3.0, MVC++ uses Microsoft's familiar visual environment, but this platform also has access to all of Microsoft's MFC and ATL extensions specific to Windows CE, as well as direct hooks to ADO and the MS Transaction

Server. That's quite a menu for function-hungry developers—too bad it all comes from the same place.

That's right—what bothers me about CE really isn't Microsoft's present tool kit. It's the lack of any significant IDE-based competition from third parties. Metrowerks has a PDA-oriented IDE package, but most of its PDA-specific tools are aimed at the Palm OS rather than at Windows CE devices. You can write Windows CE code in a Metrowerks IDE, just don't expect any help in doing so. You'll find a similar situation over at Borland with its JBuilder Handheld product. Considering that CE is a very hot contender in the game console market, where are all the third parties looking to take a bite out of Redmond's pie?

I managed to find a new product from NS Basic that addresses Windows CE 3.0 development, but I wasn't able to dig deeper than the Web site product tour—it looks functional, but not exceptional next to what's already available from Redmond. IBM's VisualAge for

Java Micro Edition looked promising but is aimed at using Java over any embedded operating system, not specifically Windows CE. And while the only game code I've ever seen didn't stem from my fingertips, Java is not the first language I'd choose in a game development project should your CE development interests flow in that direction.

The only innovations for CE projects seem to be coming from Microsoft; and, yes, you'll need to use .NET to access them. Once you're using Visual Studio.NET, however, Windows CE developers will no longer need to worry about building apps for individual processors. Using .NET's Common Language Runtime, any applications developed in VS.NET or any of its languages (especially Visual Basic.NET or Visual C++.NET) will all compile to the same hardware-independent CLR.

While this will work well for most lightweight CE applications, I've got a funny feeling it won't be acceptable to everyone, however, because of the inherent performance hit. Again, for those doing CE game programming, for example, a possible 20 percent performance slam in the name of coding convenience probably won't fly.

Those guys need to stick with MVC++ and grit out the CPU-specific ports. Too bad they're dependent on only one heavyweight vendor for development tool innovation. Where's all the competition? ■

Oliver Rist is vice president of product development for rCASH in the REALM. Reach him at orist@therealm.com.

WINDOWS WATCH



OLIVER RIST

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THE DEVELOPING JMS MARKET

As mentioned in this column two months ago ("Getting the Message With JMS," Nov. 15, 2000, page 37), Sun's Java Message Service (JMS) is about to shake up the whole middleware market. JMS specifies the APIs to a messaging-oriented middleware (MOM) engine whose implementation is required for compliance with J2EE. The effect of this is that all J2EE vendors have just entered the MOM market space, and the MOM vendors will shortly have to abandon proprietary interfaces and compete straight up on quality of implementation. Vendor lock-in will be a thing of the past. MOM vendors are justifiably worried about all the new entrants to their market space; meanwhile new players are wondering how to knock off the established MOM vendors. The market is in serious turmoil.

How serious is pointed out by a press release from Bluestone Software, a Java platform developer recently acquired by Hewlett-Packard that won a huge contract from Sabre, the folks building American Airlines' new reservation system. Bluestone won head-to-head against BEA Systems on the basis of its superior JMS implementation. Bluestone OEMs its JMS from Progress Software; this testifies to the importance JMS will have in deciding the fates of players who are not in the middleware business at all.

Right now, folks offering JMS separately from an existing J2EE implementation include Progress Software (SonicMQ), Fiorano Software (FioranoMQ), Swiss-based Softwired (iBus) and German-based IIT GmbH (SwiftMQ). As to J2EE vendors, Sun has a downloadable implementation of JMS available on its Web site, IBM has its own implementation, and BEA has one as well. Since JMS has not been nearly as important to sales as it's about to become, I expect to see new versions from BEA and IBM, either self-developed or OEM'd. The Sun JMS will probably remain more or less unchanged as a "reference" implementation that comes with J2EE.

Real-time MOM vendors, such as Tibco and Talarian, are sure to join this fray as fast as they can.

The question all parties will have to figure out is how to distinguish their offerings. And to this, there is no easy answer. The typical criteria for distinction between competitors are performance, reliability, scalability and, finally, price. Notice that because we're talking about the implementation of a defined standard, feature set is not a distinguishing aspect.

So what will be decisive? The first fac-

tor is customer loyalty. If customers currently use Talarian's SmartSockets, for example, they're going to buy Talarian's JMS—likewise IBM and Tibco customers. The other JMS vendors must compete for customers who do not already have a middleware solution installed.

So, let's look at the problems competing in each area, starting with performance. Fiorano Software claims the fastest JMS and can offer you its own benchmarks to make the point. If you

want independent benchmarks, though, you may be in for a wait. Ideally, some vendor-neutral standards body like the Open Group should run a benchmark on JMS implementations, but who would pay them to do so? Certainly not vendors like IBM or BEA, both of which compete on things other than performance. They're not in the least bit interested in seeing where they come out in a performance test. They compete on scalability and reliability, the things you can't quantify but are important to every IT shop that wants middleware. So Fiorano is out of luck until some magazine decides to pony up the cash to undertake the massive project of testing JMS implementations. And by then, it may have to compete with Talarian and Tibco, which specialize in real-time messaging performance. Fiorano has a marketing problem.

How about reliability and scalability? The market leader right now in JMS is SonicMQ from Progress Software. Progress, you may recall, was a company with a database and development tools aimed at the reseller market. It then took an interesting detour into graphical components, refound its database roots and is now into JMS. The database aspect certainly suggests reliability, but scalability—who knows? The Progress database is oriented to shops too small for standard Oracle and DB2 implementations. So, how does Progress prove scalability? It can't. Not the way IBM can, for example. The American Airlines project mentioned previously will be a good test, but the results won't be available any time soon.

As to price, you can't beat Softwired, which gives away its JMS implementation even for commercial deployment. That means other vendors won't be able to compete on price.

So, what you have is a classic immature market—no established leader and no basis for comparing any two implementations. If you need to get a JMS implementation soon, how do you solve this problem? Only one way: Talk to users of each product at length. Get references from vendors and interview the users in detail. Good luck. ■

Andrew Binstock is the principal analyst at Pacific Data Works LLC. Reach him at abinstock@pacificdataworks.com.

MIDDLEWARE WATCH



ANDREW BINSTOCK

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AND THEN CAME ZOPE...

Until the very last decade of the last millennium, self-respecting programmers used several different programming languages in the normal course of their work. Beyond the common languages like FORTRAN or COBOL, every programmer had an idiosyncratic quiver of proprietary and less-known languages to tackle unusual problems—a database-centric language like PAL, Prolog for natural language processing, and Jorf for no better reason than it was the only pure object-oriented language named after a goat.

And then came the ascendancy of C and C++, whose programming models emphasized modular function libraries, and Visual Basic, a simple-to-use language with unparalleled third-party component support. As programmers became software developers and even software engineers, the needs of the team were elevated above the desires of the individual, and that meant abandoning anything as frivolous as mastering computer languages for their own sake.

In the history of the World Wide Web, the importance of Larry Wall's Perl cannot be overstated. The primary reason the Web exploded in popularity was the ease with which new sites could be developed—neither HTML nor CGI programs written in Perl required formal training or expensive tools. A profession that had accepted that meaningful software required mastery of not just a multithou-

sand-function API, but a multihundred-class object-oriented framework, was suddenly given the freedom to choose a text-stream-oriented, interpreted language that was ideally suited for the text-stream-oriented, not-so-fast tasks of the World Wide Web. That made it cool to be a language junkie again.

A few years ago, author Bruce Eckel, whose predictions of language trends are pretty impeccable (you might know him from his "Thinking in C++" and "Thinking in Java" books), started raving about Python. "Python is my language of choice for virtually all my own programming projects," he declared. Naturally, I checked into it. I admired the brilliant innovation of scoping by indentation, but at first Python seemed to me not very superior to Perl for Web development.

The first thing that made me re-examine Python was VPython (née Visual Python, see <http://cil.andrew.cmu.edu/projects/visual>), an incredible scratch pad for three-dimensional programming. If you've been looking for a foundation for exploring quaternion-based rotations, your quest is ended. I became more comfortable with Python as I worked on a too-cute presentation that showed risk-spiral, phase-effort and temporal views of software project management along orthogonal axes (the resulting shape,

which looked like an incense coil spun by a drunk in the act of falling down, was so incredibly distracting when rotated on screen that I gave up on the theme). In order to create this monstrosity, I surfed about, picking up more and more Python techniques and libraries.

And then came Zope...

SD Times is written for software development managers, not for hackers, and we columnists try to maintain a

professional tone about technologies and products, but there's no accurate way to talk about Zope without liberal use of exclamation marks and hyperbole. Zope is sick insane!!!! It's the greatest thing since Bind!!!! It's the finest language innovation since Guido van Rossum decided to use indenting for scoping!!! And so forth.

The unofficial (but very good) Zope FAQ at <http://weblogs.userland.com/zopeNewbies/ZopeFAQ/> describes Zope as a Web publishing system, although acknowledging that it is also widely called an application server. I think Zope is a language for programmatic Web sites. Not a language that can be called by Web sites and not a server-side scripting language, it's the Visual Basic of Web programming (or, if you prefer a more correct but less accessible metaphor, the SQLWindows of Web programming). Like those seminal Windows programming tools, Zope immerses you in the environment for which you're program-

ming, in Zope's case, the Web. To work in Zope, you work from a browser displaying HTML 3.0 code—not exactly Visual Studio, but at least it's operating system- and location-independent.

At the heart of Zope, and what makes it more than just another server-side scripting language, is an object-oriented database (which you can back with a relational database such as MySQL, SQL Server or Oracle). This OODB contains "Z Objects" (+ "Publishing Environment" = "ZOPE"), the most important of which are page templates (written in a server-side scripting language called Document Template Markup Language) and extension objects ("Products") that are generally written in a combination of DTML and Python. The most impressive Zope Product is surely Squishdot (www.squishdot.org), which allows one to create a Slashdot-style Web site in an afternoon.

The open-source Zope compares favorably, very favorably, with the most expensive application servers in the marketplace. Do yourself a favor and check out Zope and Python. And if you find yourself playing with them just for the sheer fun of it, don't tell anyone you read about them in SD Times. We're far too serious a newspaper to encourage such things. ■

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WEB WATCH



LARRY O'BRIEN

KRYPTONITE

Suppose you awake tomorrow and learn that you are Superman. Your mom and dad aren't your real parents; they found you and raised you, but you were born on Krypton. With the knowledge you gain super strength, X-ray vision, all kinds of super powers. You're faster than a speeding bullet, more powerful than a locomotive. What would you do first?

I know what I'd do. I'd hire a PR firm and start a broad-based public-opinion campaign to convince the world that kryptonite couldn't hurt a fly. That story about how it could sap me of my powers? It's just a myth, an old wives' tale. I'm Superman. I'm not afraid of anything.

You appreciate the strategy, I'm sure. Why would I endanger my position by admitting vulnerability to the one element my enemies could use to defeat me? Far better to scoff, ridicule, deny. Oh, kryptonite. Yeah, I think I've heard of it. What's it supposed to do, again?

LEARNING FROM THE MASTERS

I'd like to take credit for concocting this strategy. But it is not original with me. The truth is, I've adopted it from Microsoft. Linux? Oh yes, I think I've heard of it. It's that hobbyist operating system, isn't it? The one the hackers are

so excited about. They seem to think you should run your business on free software written by hobbyists, would you believe it? What will they think of next?

For the past two years, disparagement has been a theme in Microsoft's statements about Linux and the open-source movement.

Disparagement has been a pretty good strategy, as it turns out. If you act as if you're not afraid of an upstart operating system, your customers will conclude that you have nothing to fear. I understand hackers run it on old 486s they have lying around the house—it's supposed to make a pretty good makeshift firewall if you can't afford a real one.

It's easy to misdiagnose this strategy as arrogance. Microsoft seems to be saying that it is so big and powerful its position is unassailable. Its lack of concern looks like confidence.

But if there's one thing we know about Microsoft, it is that the company's confidence is only on the surface. Internally, the company is always analyzing threats, shoring up vulnerabilities, assessing enemies and bolting on extra layers of defensive armor.

Myth has it that Microsoft's defensive

posture comes from the paranoia and insecurities of its top executives. Maybe so, but I think it's also plain common sense. When you're the fastest gun in town, every tinhorn looking to make a name for himself is going to be gunning for you. It's not paranoia if they really are trying to get you.

REALLY TRYING TO GET THEM

Microsoft was forced to drop its unconcerned pose during its antitrust battle with the U.S. Dept. of Justice. On the stand, executives admitted that they viewed Linux and the open-source movement as threats to Microsoft's position in the market.

The pundits had fun blasting Microsoft for its inconsistency. They pointed out that admitting fear was good legal strategy because it reinforced Microsoft's position about the fleetingness of market share. But I think the analysts underestimated the extent to which all of Microsoft's statements can be explained by an earnest, abiding fear that the open-source movement could bring an end to its role as king of the mountain.

Evidence of Microsoft's real thinking regarding open-source software is revealed in the so-called "Halloween documents," internal memos prepared by a Microsoft staffer and leaked to members of the open-source community. The

memos—read them yourself at <http://opensource.org/halloween>—expose a deeper and more realistic appreciation of the strengths and weaknesses of the open-source movement than anything you'll hear in a Microsoft exec's keynote speech. And they reveal a chillingly Nixonesque menu of alternatives for dealing with the open-source threat.

Microsoft has admitted the existence of the Halloween memos but characterized them as the unofficial raw thoughts of a junior staff member, not official company policy. Fair enough.

But when Microsoft can concoct a new volume-licensing scheme for paying customers—an arrangement that has nothing to do with open-source software—and introduce it proudly as the "Open License"...well, there's no doubt about what they're up to. It's like dropping counterfeit currency onto your opponent's territory during a war. If "open" loses its meaning, it will also lose its value as a marketing term.

Open software? That's all about what license you use. There's GNU, Netscape, a couple dozen of 'em, I think. We even have our own Open License. Let me give you a brochure... ■

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OPEN SOURCE



J.D. HILDEBRAND

ORACLE

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ket its .NET servers and tools. "We already have .NET toolkits for SOAP [Simple Object Access Protocol] and for Visual Studio, and the BizTalk Server is already out that manages XML information." He said the

Commerce Server and Application Center were also on their way out the door to customers.

Microsoft isn't the only company scoffing at Oracle's statements.

Quick to repudiate Oracle's claim to offer legitimate Web services now, Mike Gilpin, vice president and research leader

at Giga Information Group Inc., said, "For developers the real question is: Is the way Oracle's service is being positioned as an alternative to Web services a valid one? I believe it is not a valid one."

Gilpin claims that for Web services to be of value they must be initiated industrywide

and get support from multiple vendors. "The key idea behind Web services is a new dynamic way of discovering and using services over the Internet that requires a new generation of Internet infrastructure to be built, which doesn't exist yet." He said of Oracle's Dynamic Services that "something that is

only supported by Oracle is inherently counter to that fundamental requirement."

While admitting that his product isn't fully standards compliant, Oracle's Magee said that SOAP, UDDI and the Web Services Description Language (WSDL) specifications figure prominently in Web-service products, and that 9i Dynamic Services would support them all when they become finalized. "We work with SOAP internally now, but wouldn't expect our customer base to use it until the specification has been recommended by the W3C," he said.

He said that by using Dynamic Services, programs could be created to access services offered on Web sites—bypassing the current HTML interface used by users—because Dynamic Services is formed around XML and Java and provides API building. He added that Dynamic Services would use Oracle's Internet Directory until the UDDI specification became official.

WHAT ABOUT .NET?

Microsoft's Goffe claimed that it's possible to build Web services today using Microsoft's current generation of servers, but that it requires a great deal of hand coding by developers to gain certain features the UDDI specification will offer, for example. He said Microsoft has customers building Web services using its currently available server software.

Giga's Gilpin cautioned it would be hard to slip from Dynamic Services' proprietary grasp when Web-service specifications are finally recommended. "From a business perspective, if I had a problem and I chose to solve it today using Oracle, and admittedly there is a value to being able to do that now, my solution would be internally proprietary to the Oracle environment, and externally it would be specific to my implementation, rather than to a standardization of services or the discovery mechanism." He said that Web publishers would likely want an environment that is as broad as possible to be used by as many potential customers as possible, rather than those committed to Oracle.

Oracle's Magee said Dynamic Services runs on Linux Solaris, Unix and Windows, and can be downloaded from <http://otn.oracle.com>. ■

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DELPHI

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application development for local and client/server database connectivity, Swindell said, and will include XML, MySQL and Interbase database connectivity. Swindell described its DataCLX components as a set of easy-to-use data access components that can be dropped into applications to add instant database connectivity. "Underneath DataCLX sits DBDirect, which is our cross-platform data access engine," Swindell said, adding that it is similar to ODBC or JDBC engines but smaller and faster. It also is extensible, he said, and enables driver developers to build databases in anticipation of new database versions and features. Borland plans to publish reference source code for the open specification.

Common to all three versions will be the native code Delphi ELF format compiler, a visual RAD IDE and the Borland CLX component framework and customizable library including Web, Internet, database, Linux system and GUI components. The company also promises "high compatibility" with the Delphi 5 visual component library for Windows, but does not promise 100 percent compatibility until the release of Delphi 6.0 for Windows, which is scheduled for midyear.

Originally expected in mid-2000, Kylix met with delays, which according to Simon Thornhill, vice president of Borland's RAD business unit, were mainly due to a lack of development tools for Linux. "If we had Kylix, it would have been a lot quicker," he said wryly. Instead, Thornhill said the project was begun using a GCC compiler to build the Kylix compiler and "bootstrap" the project. "Once we got the compiler going, we quickly cut over to our own tools and built the debugger," along with the libraries and the IDE, "which was quite a long process," he said.

Swindell defended the company's delivery timetable. "Most projects of this size are two- to three-year projects, because you're talking about building a complete compiler infrastructure, debugging subsystem, IDE and a complete class framework and set of class libraries," he said. "We really wanted to ship before the end of the year, but that was a pretty aggressive goal." Swindell

attributed additional delays to the recent release of the Linux kernel 2.4 and the multitude of Linux distributions that exist, plus Borland's efforts to be compatible with the majority. "The testing and QA have been much bigger than anything we've done before," he said.

According to Swindell,

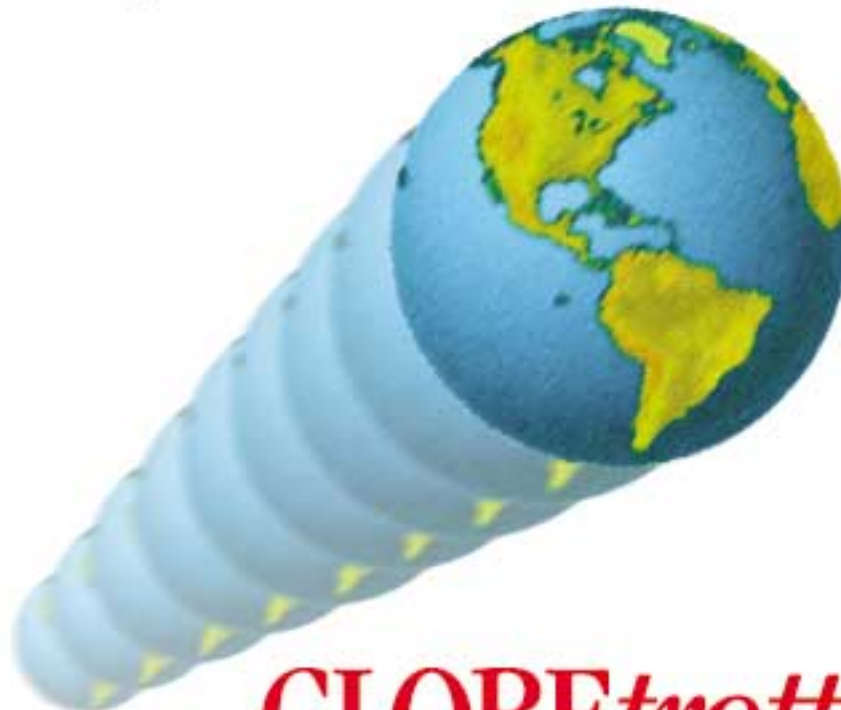
"Kylix is the first tool that addresses enterprise-class application development. Oracle and DB2 support are going to be key to the enterprise. There are a lot of companies that are starting to implement Oracle on Linux and using Apache as their Web server. One of the things that has been missing for

Apache is a high-performance Web framework, and that's what we're delivering."

Set to begin shipping this month, Kylix initially will be available in two versions: the Kylix Server Developer edition (\$1,999), and the Kylix Desktop Developer edition (\$999). Both will generate code for propri-

etary or GPL licensing. The company (www.borland.com) also plans to release before midyear the Kylix Open edition, a free version (\$99 shrink-wrapped) that will generate only GPL code. The first versions will support only x86 processors, with Itanium support likely to follow next. ■

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NEW BRAND SPANKING

Industry companies shelled out a tremendous amount of money last year on rebranding, trying to position themselves atop the latest waves of technology. Buzzwords became corporate strategies, and imaginations—not to mention budgets—were stretched to their limits to come up with identities that reflect these changing missions. While it's impossible to quantify, it can safely be said that much of this rebranding effort was prompted by the evolutionary nature of the industry. Perhaps somewhat more was prompted by last year's market debacle. Whatever the reason, many good, solid companies felt compelled to abandon their brands as they reached for Nasdaq nirvana.

Whether or not they succeed—do the names Cigital, Infragistics and Gobosh really serve to clearly state what these companies do?—remains to be seen. (As a public service, I offer mElang to any company looking for a name for its m-commerce embedded application suite. No fee is necessary; a mention of my name once in a while as "creative spirit" will suffice. Notice the "E" is uppercase to differentiate it from the chat system of a similar name, as well as to pre-empt any potential litigation.)

Company names don't have to be as staid as International Business Machines to be effective (see Apple). It's often a matter of just sticking with it. The money spent on rebranding could be better spent on marketing the existing brand, or better yet...on selling actual products!

Thus, the recent announcement by Computer Associates International that it will spend upwards of \$100 million on advertising and marketing its existing brand is met here with huzzahs and applause. Once known as a patchwork



MONEY WATCH



DAVID RUBINSTEIN

kind of company for its acquisition of many disjointed products that seemingly could not be integrated into a coherent corporate plan, CA wants to portray a clear vision of itself as a company that creates software to manage e-business.

Print ads and a television spot that features roosters giving a wake-up call to companies not yet fully committed to e-business are the cornerstone of the campaign, as is a new corporate logo. Sanjay Kumar, CA's CEO, waxed hyperbolic about the logo, saying it offers "high energy and vision with good old-fashioned, feet-on-the-ground stability." Cock-a-doodle-doo!

COREL RUMORS DON'T DERAIL MICROSOFT PACT FOR LINUX

Corel Corp. recently felt compelled by all the buzz in the media to issue a statement intended to quash any and all rumors about the sale of its Linux division. Corel, the statement said, is reviewing its entire operation but will not comment on anything until something is done. It's like the general manager of a baseball team saying none of his players is untouchable, but then saying he has no intention of trading any of them.

How does all this relate to Microsoft, you ask? As reported in this space last November, after Microsoft took a stake in Corel, Microsoft wrote into the agreement filed with the Securities and Exchange Commission a proviso that

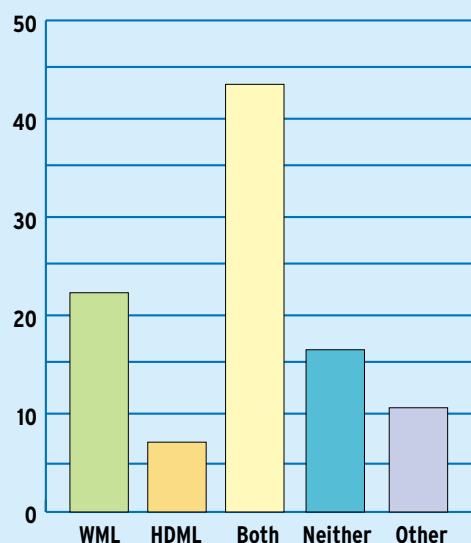
when Microsoft is ready, it can divert engineers from Corel to create a version of Linux for Microsoft. So despite all the rumors of Corel selling off its Linux operation, Tom Button, Microsoft's general manager of development tools, said there is "nothing being contemplated that would make them unable to fulfill the clause." Button continued to downplay Microsoft's development of Linux, saying there is no plan to exercise the clause, and that Microsoft simply was "baking an option" into the agreement—making it sound like a throw-in to the deal. Yet that option spells out in detail the number of years Microsoft has to exercise the option (three), the number of engineers and testers Corel must put on the task (30) and the amount of time they have to complete it (12 months). That's quite a recipe for a "baked-in" option. ■

David Rubinstein is executive editor of SD Times.

BUSINESS BRIEFS

One company seemingly not affected by the so-called "soft landing" of the U.S. economy is **Rational Software Corp.**, which reported revenues of \$215.5 million for its third quarter and \$573.3 million for nine months ending Dec. 31, 2000. This marks an improvement of 47 percent and 46 percent, respectively, over year-to-date reports. Third-quarter earnings per share was 20 cents, up from 13 cents a year ago . . . The board of directors of **Pervasive Software Inc.** has authorized the repurchase of up to \$5 million of the company's common stock. After showing a loss per share of between 5 cents and 9 cents for the second quarter ending Dec. 31, 2000, the stock was trading at about \$2.50 on Jan. 16 after reaching about \$15 per share last March . . . As expected, shareholders of **Programmer's Paradise Inc.** have approved the sale of the company's European subsidiaries to **PC-Ware Information Technologies AG** for 14.5 million euros. Programmer's Paradise executives have said the lagging European operations have been a drag on the company's earnings and stock price. ■

Will Developers Target WML, HDML or Both? EVANS DATA WATCH



The acceptance of wireless technologies can be seen in the number of developers who say they will write wireless applications in the next two years.

According to a survey of 310 software developers, more than 43 percent say they expect to work on a wireless application in that time, writing both WML (Wireless Markup Language) and HDML (Handheld Device Markup Language) projects. Only about 10 percent of the developers surveyed said they had no plans to work on wireless applications.

Source: Evans Data Corp., Wireless Developer Survey, October 2000



CALENDAR OF EVENTS

Windows Embedded Developers Conference Feb. 6-8
Mandalay Bay Resort and Casino, Las Vegas
CMP MEDIA INC.

Three-day conference package including exhibits, \$1,095; two-day package, \$895.

www.WindowsEmbeddedDevCon.com

Software Management Conference & Expo Feb. 12-16
Paradise Point Resort, San Diego

SOFTWARE QUALITY ENGINEERING
Conference plus two tutorials, \$1,945; conference plus one tutorial, \$1,645; conference only \$1,345; tutorials only, \$1,240.

www.sqe.com/sm

Internet Appliance Workshop Feb. 20-21
San Jose Wyndham Hotel, CA

CONFERENCE CONCEPTS INC.
Two-day conference including all events, \$995; tutorials only, \$595; workshops only, \$495; single tutorial, \$345.

www.netapplianceconf.com

International Conference for Java Development Feb. 26-March 2
Marriott Marquis, New York

CAMELOT COMMUNICATIONS CORP. AND SUN MICROSYSTEMS INC.
Three-day conference plus night sessions and Java University, \$1,995; conference only, \$1,295; any two days, \$800; any single day, \$500; other packages available. Advance exhibit registration is free, \$25 on-site.

www.javacon2001.com

Software Test Automation Conference & Expo March 5-8
The Fairmont Hotel, San Jose, CA

SOFTWARE QUALITY ENGINEERING
Conference plus two tutorials, \$1,945; conference plus one tutorial, \$1,645; conference only \$1,345; tutorials only \$1,240; other packages available.

www.sqe.com/testautomation

ApacheCon April 4-6

Santa Clara Convention Center, CA
CAMELOT COMMUNICATIONS CORP.
Pricing not yet available.

www.apachecon.com

XML DevCon-Spring April 8-11

Marriott Marquis, New York
CAMELOT COMMUNICATIONS CORP.
All conferences, tutorials and night classes, \$1,995; three-day conference package, \$1,650; other packages available; discounts before March 9.

www.xmldevcon2001.com

Send news about upcoming events to events@sdtimes.com.

YOU ARE CORRECT, SIR!

Thanks to the many readers who responded to our New Year's name game for a chance to win a Palm organizer. Not surprisingly, there was not one incorrect submission in the bunch. (The Web's a wonderful thing, isn't it?) Look for the names of the winners in the Feb. 15 issue!

OLD

- Software Emancipation
- Object Design
- KL Group
- Object Switch
- Software Instruments
- Reliable Software Technologies
- SmartDB
- Cambridge Interactive

NEW

- Upspring
- Excelon
- Sitraka
- Kabira
- Intellium
- Cigital
- Taviz
- PowerSteering Software

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